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A Model of Anorexia Nervosa
from a
Human Ecology Perspective

by

©

Lana Ohler-Madsen

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements of the degree of Master of Science

in

Family Studies

Department of Human Ecology

Edmonton, Alberta

Spring, 1995

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Maryanne Poirier
Dr. Maryanne Poirier

Feb. 14, 1995

Lyle Larson
Dr. Lyle Larson

Dedication

I would like to dedicate this thesis to my husband, Henry, and to my parents, Neil and Elizabeth, with love and appreciation for their support and encouragement.

Thank you!

ABSTRACT

The main theoretical frameworks proposed as an explanation of anorexia nervosa are reviewed and critiqued. These include the physiological, behavioral, socio-cultural, feminist, familial and individual psychopathology frameworks. Each approach has contributed to the understanding of anorexia nervosa, but considered independently, none of the perspectives has been able to fully explain the enigma of the disorder.

Through a comprehensive review of the clinical, qualitative and quantitative literature from each of the perspectives, a holistic model of anorexia nervosa is presented in this thesis. Utilizing a human ecology theoretical framework, the model identifies biological, psychological, familial, and sociocultural factors which may influence the development, perpetuation and outcome of the illness as it progresses over time.

Using the model as a framework, implications for future research are proposed. It is hoped that the model may provide anorexics, their families and practitioners with a better understanding of the illness, and may serve as a guide to future research, prevention and treatment practices.

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A MODEL OF ANOREXIA NERVOSA FROM A HUMAN ECOLOGY PERSPECTIVE

CHAPTER I: INTRODUCTION

Anorexia Nervosa by direct translation means a loss of appetite due to a neurotic or psychotic disorder. It is usually diagnosed in young adolescent females, and is characterized by an obsessional fear of becoming fat. This fear leads to a stringent diet, severe weight loss, disturbed patterns of behavior and, in some cases, death.

The first clinical accounts of anorexia nervosa were recorded in France by Lasegue in 1873 and in England by Gull in 1874. Although few cases were recorded from that time until the 1950's, the prevalence has increased dramatically over the past four decades. Publications regarding the causes, symptoms and outcomes have become common in both academic and popular journals (Thompson, 1993). Despite numerous efforts by clinicians and researchers to explain the disorder, it remains an enigmatic illness.

From 1950 to the late 1980's, a number of theories were proposed in an attempt to explain why individuals in our affluent society choose to starve themselves. These theories originate from biological, psychological, behavioral, socio-cultural, familial, and feminist frameworks (Gremillion, 1992; Hsu, 1988, 1990; Sibley & Blinder, 1988; Thompson, 1993). While each of these theories may be useful in identifying contributing factors to the etiology and perpetuation of anorexia nervosa, taken alone, none can fully explain the complexity of the disorder.

In the past decade, numerous clinicians have suggested the need for a multidimensional approach to anorexia nervosa, considering the complex interplay of the psychological, biological, socio-cultural and familial factors (Garfinkel, 1991; Kennedy & Garfinkel, 1992; Hsu, 1990; Sheppy, 1985; Sheppy, Freisen & Hakstain, 1988; Vandereycken & Meermann, 1984; Vandereycken, Kog & Vanderlinden, 1989). To date, however, little research has been conducted from a multidimensional framework (Sheppy, 1985; Sohlberg & Strober, 1994). Empirical research continues to focus on unidimensional, discipline specific theories, assessing isolated variables at isolated points in time. These unidimensional theories have driven the majority of treatment approaches (Gremillion, 1992;

Thompson, 1993). Unfortunately, treatments to date have had limited success, and understanding of the disorder for anorexics, their families and clinicians, continues to be obscure. A new approach to the study of anorexia nervosa may be fruitful in advancing our understanding of the illness, and may ultimately guide more effective preventative and treatment measures.

The purpose of this thesis is to propose a unique, multidimensional approach to anorexia nervosa. The methods used to develop the theoretical model of anorexia, have developed as a process over time. Similar to the evolving process of theory development described by Strauss and Corbin (1990) in their description of a grounded theory approach, the present model of anorexia has evolved from an on going process of reviewing and critiquing the literature and comparing the claims of the clinical and empirical data to experiences described in the qualitative and autobiographical accounts of the lived experience.

Beginning with a search of the literature and critique of the major theories (Ohler-Madsen, 1990a), it became apparent that considerable discrepancy existed between theoretical speculation and empirical data. Although each of the theories reviewed seemed to have some concepts which received empirical support, each remained with major limitations. It seemed, however, that there were overlaps between the theories. Aspects of the disorder one theory was unable to explain, were explained well by another theory. In this early stage of research, many "missing links" seemed evident.

Following this initial research project of the etiological theories, a thorough search of the empirical data ensued. With an understanding of empirical results, the discrepancies between clinical and empirical data, and the methodological difficulties inherent in research on anorexia nervosa, the need for a different approach to the study of anorexia became apparent.

Although theoreticians and clinicians have been advocating a multidimensional approach since the early 1980's (Garfinkel & Garner, 1982; Yager, 1982), there have been few attempts to link the information gleaned from the various perspectives together. Instead, studies have continued to investigate the same, discipline specific research questions and results from these studies continue to be equivocal. Proponents of each perspective seemed to *critique* rather than *incorporate* research data from other disciplines.

Thus, a representation of the literature on anorexia nervosa is needed, incorporating and linking what was already known about the disorder, and identifying areas that remain ambiguous. It is not a new "theory" that is needed, but a model which will integrate extant theories and data - a model which can link the empirically supported components of extant theories, describing how the limitations of one theory may be explained by the strengths of another. By developing such a model, a true "multidimensional" approach to anorexia may be created.

In summary, the following thesis proposes to:

a. define anorexia nervosa and identify the central features;

b. provide a thorough review and critique of extant theories and data on anorexia nervosa;

c. identify components of the extant theories that are well supported and identify links between the theories;

d. present a rationale for the development of a new approach to anorexia based on difficulties associated with applying mainstream theorizing to the study of anorexia nervosa;

e. present an overview of the proposed human ecology theoretical framework;

f. present a model of anorexia nervosa from a human ecology perspective;

g. provide an overview and evaluation of current treatment approaches;

h. identify implications for future application of the model in research and practice.

CHAPTER II: A DESCRIPTION OF ANOREXIA NERVOSA

> "A young woman thus afflicted, her clothes scarcely hanging together on her anatomy, her pulse slow and slack, her temperature two degrees below the normal mean, her bowels closed, her hair like that of a corpse, dry and lusterless, her face and limbs ashy and cold, her hollow eyes the only vivid thing about her...This wan creature whose daily food might lie on a crown piece, will be busy yet on what funds God only knows." (Allbutt, 1910, p. 398)

The above excerpt provides a graphic picture of a victim of anorexia nervosa: Emaciated, cold, lusterless...but driven by some unknown source of energy towards a "relentless pursuit of thinness" (Bruch, 1973, p. 4). In most industrialized countries, this portrait of an anorexic is common to many people. Few people, however, understand a full clinical picture of the illness or how it effects the lives of the victim and their families (Furanham & Hume-Wright, 1992). In the following section, a clinical definition and profile of the physical and psychological characteristics of anorexia nervosa will be presented.

Definition and Characteristics

As defined by the American Anorexia Nervosa Association, anorexia nervosa is a "serious illness of deliberate self-starvation with profound psychiatric and physical components" (Neuman & Halvorson, 1983, p. 2). The disease is a complex emotional disorder characterized by an obsessive fear of becoming fat. This leads to a stringent diet, severe weight loss, and sometimes death.

The most recognized tool used to diagnose anorexia nervosa is the DSM III-R (Diagnostic and Statistical Manual for Mental Disorders, APA, 1987). The criterion outlined in this manual are depicted in Table 1.

Table 1: DIAGNOSTIC AND STATISTICAL MANUAL FOR MENTAL DISORDERS, THIRD EDITION, REVISED (DSM III-R, APA, 1987)

Criterion for diagnosis of clinical anorexia nervosa

1. A refusal to maintain normal body weight for age and height. Weight is at least 15% less than expected.
2. Acute fear of weight gain or obesity even though underweight.
3. Disturbances of body image.
4. No physical illness responsible for the condition. In females, amenorrhea for at least three consecutive months.

From this basic diagnosis, anorexia nervosa is further divided into subtypes:

Bulimic type: During the episode of anorexia nervosa, the person engages in recurrent episodes of binge eating.

> **Nonbulimic type:** During the episode of anorexia nervosa, the person does not engage in recurrent episodes of binge eating.

Nonbulimic type anorexia nervosa is often referred to as "restrictor" or "classical" anorexia. It is characterized by a drastic restriction of calories, excessive exercise, social withdrawal and extreme devotion to academics and/or athletics. Bulimic type anorexics are often referred to as "bulimic anorexics". These individuals generally display similar characteristics to restrictor anorexics, but occasionally binge and purge. It is important to note that the definition of a binge for bulimic anorexics is variable. Although a "binge" to most anorexics refers to a loss of control and indulgence in a "forbidden food", the binge for some may be very small (e.g. two cookies or a small bowl of ice cream) but for others, very large (consumption of a very large quantity of food in a short period of time). Few restrictor anorexics are able to maintain complete restraint from eating. For most, they will at some point lose control and engage in "a binge" (Thompson, 1993). Therefore, bulimic type anorexia may be a movement along the natural course of anorexia nervosa

(Garner & Garfinkel, 1988; Herzog, Rathner & Vandereycken, 1992).

In a recent study by Garner, Garner and Rosen (1993), anorexics were subclassified yet further with a purger/non-purger classification. Based on evidence from clinical interviews from anorexics and the current concern of researchers regarding the definition of a binge, these authors questioned whether all anorexics binged and purged, or simply purged. The results from this study suggest that there are a significant number of anorexics who do not engage in bingeing, as defined by the DSM III-R (large amounts of food and feeling of loss of control), but purge regularly after consumption of normal, or very small amounts of food. These subjects were older than the restrictor anorexics, had been ill significantly longer, and displayed greater psychopathology. The authors suggested more research was needed to determine whether purging was a natural course of the disorder, or whether "purgers" were a specific class of anorexics.

A related eating disorder receiving considerable attention in the literature today is bulimia nervosa. It is characterized by recurrent episodes of binge eating (rapid consumption of large quantities of food in a discrete time period), feeling of lack of control during the binges, purging (self-induced vomiting, excessive use of laxatives, fasting or excessive physical activity), and persistent overconcern with body shape and weight (DSM III-R, APA, 1987). Bulimia nervosa is also divided into subtypes, the "purging type" (individual regularly engages in self-induced vomiting or the use of laxatives or diuretics) and the "nonpurging type" (does not engage in regular purging but uses fasting or vigorous exercise as compensatory measures). Individuals suffering from bulimia nervosa may further be categorized based on whether they are normal or low weight, and whether they have or have not had a history of anorexia nervosa.

The proposed DSM IV, complicates diagnosis of eating disorders further with the possible introduction of two new categories, "Binge Eating Disorder" and "Eating Disorder Not Otherwise Specified (NOS)". Binge eating disorder diagnosis is identical to bulimia nervosa but the individual does not engage in any compensatory behaviors. The eating disorder not otherwise specified (NOS) includes:

a. Sub threshold anorexia nervosa: individual may not have ceased menses, or may have lost weight but is not in an abnormally low weight category; and

b. Sub threshold bulimia nervosa: individual may engage in atypical behaviors such as: abuse of thyroid medications, diet pills or insulin (when diabetes is comorbid); bingeing less frequently (less than 2 times/week for three months); utilizing one or all compensatory behaviors after eating a very small amount (two cookies); or chewing but not swallowing large amounts of food.

It is obvious that there is considerable variability in the behavioral characteristics of individuals suffering from eating disorders. It is controversial whether these "varieties" are separate disorders, linked disorders, or the same disorder with variable symptoms at different stages of the illness (Garner and Fairburn, 1988; Garner et al., 1993). It is generally agreed that true "restrictor" anorexia nervosa and true bulimia nervosa are separate disorders. Because the subtypes of the disorders tend to "share" characteristics, the issue of diagnosis for these individuals becomes cloudy. The issue becomes confused even further when the newly proposed diagnosis of binge eating disorder and eating disorders not otherwise specified are considered.

Although it seems futile to continue developing separate diagnosis for specific characteristics of eating disorders, empirical research tends to support differences between the disorder types on constructs such as personality traits, familial patterns and the incidence of co-morbid disorders. To date, however, there has been little research to determine whether these differences are due to differential diagnosis, or different stages along the course of a common biopsychosocial illness (Garner et al., 1993; Halmi, 1995; Herzog, Rathner et al., 1992; Kennedy & Garfinkel, 1992; Shaw & Garfinkel, 1990; Shisslak, McKeon & Cargo, 1990; Vandereycken & Meerman, 1992).

In general, restricting anorexics tend to be younger at age of onset, and are described as displaying quiet and compliant premorbid personality traits. The families of restricting anorexics describe themselves as happy and relatively conflict free prior to the onset of the disorder (Atkins & Silber, 1993; Butler, 1988; Bruch, 1978, 1988; Stierlin & Weber, 1989; Sohlberg & Strober, 1994). Bulimics have been noted to be slightly older at age of onset, display a more aggressive personality type, and are from families which display overtly conflictual interactive patterns (Strober, 1981; Kennedy & Garfinkel, 1992; Garfinkel, Garner & O'Shaughnessy, 1985; Hodges & Le Grange, 1993; Shisslak, et al., 1990). Bulimic anorexics seem to display a variety of personality types, are generally slightly older than restricting anorexics, and are from families with varied interaction patterns (Tolstrup, 1992). Although a few studies have indicated differences in individuals displaying some form of eating disorder not otherwise specified, the results are varied. Because the classification involves a wide variety of possible characteristics, a lack of consistent results is expected (Garner et al., 1993). It has been noted in recent outcome studies, that the subclassifications of the eating disorders are the most difficult to treat (Edelstein & Yager, 1992; Hsu, 1988; Kog & Vandereycken, 1989; Theander, 1992; Wonderlich, Swift, Slotnick & Goodman, 1990).

The present paper will be limited to an exploration of anorexia nervosa. The focus will be on restrictor anorexia, however, because associated anorexic disorders may be linked to the primary disorder, they will also be discussed.

Central Features

Restrictor anorexics are generally from middle to upper class families, are attractive and intelligent, and possess high standards and goals in academics and sports. They rarely suffer from a lack of friends and are identified as being socially active and involved in extra-curricular activities (Furnham & Hume-Wright, 1992; Kerr, Skok & McLaughlin, 1992; Sohlberg & Strober, 1994).

The clinical symptoms of anorexia nervosa have been divided into two categories: biological characteristics and psychosocial traits (Bayer, 1984; Bruch, 1984; Swift, Andrews & Barklage, 1986; Stern et al. 1989; Thompson, 1993).

The biological characteristics include the following:

1. age at time of study between 10 and 40 and age at onset generally between 10 and 30;
2. loss of 15% or more of original body weight (or, if under 18, weight loss plus projected chart weight for age and height) and 15% below normal weight for age and height;

3. decreased heart rate and blood pressure;
4. insomnia;
5. appearance of lanugo hair (fine body hair over entire body);
6. constipation and difficulty urinating;
7. dry, chapped skin; dark brittle nails; fine, lifeless hair;
8. numbness and tingling in the limbs;
9. hypothermic reaction - body will normally feel chilled;
10. amenorrhea (loss of menstrual period), or delayed menses; and,
11. no known medical cause for weight loss and anorexia.

The common psychosocial traits, cognitions and behaviors include the following:

1. obsessional behavior and thought patterns towards food;
2. distorted body image;
3. excessive physical activity patterns (appear near hyperactive);
4. irritability;

5. increased perfectionism, especially in the area of academics or sport involvement;
6. fear of interactions with the opposite sex; abnormal paranoia towards sexual encounters;
7. low self-image and sense of ineffectiveness;
8. feelings of external locus of control;
9. disturbance in the accuracy of perception or cognitive interpretation of stimuli arising within the body with failure to recognize signs of nutritional need; and,
10. excessive use of laxatives and/or diuretics[1].

Not all of the above traits appear in every reported case. In most, however, the majority of the physiological and psychosocial characteristics will be easily identified. The intensity of each of the characteristics is unique to each individual.

Premorbid Characteristics

Descriptions of anorexics during their childhood found in clinical, qualitative and anecdotal[2] literature, identify relatively consistent patterns of behavior and personality. The pre-anorexic is generally described as quiet, submissive, compliant, perfectionistic, and extremely sensitive to others needs. They have been described by some as over-controlled and emotionally constrained, displaying near obsessive behaviors towards achieving and pleasing others. One commonly noted trait has been the lack of interoceptive awareness, or the apparent inability for the (pre)anorexic to observe and communicate inner emotional or physical states (Bruch, 1978, 1988; Dally, 1969; Casper, 1990; Crisp, 1980; James, 1990; Johnston, 1993; Heater, 1983; Garner & Garfinkel, 1988; Ohler-Madsen, 1992a, 1992b; Minuchin et al., 1978; Telerant et al., 1992; Stierlin & Weber, 1989).

---

[1] symptoms which accompany anorexia/bulimia but which may also infrequently accompany classical anorexia.

[2] A distinction will be made throughout this thesis between clinical, empirical, qualitative and anecdotal literature. Clinical refers to data gathered and reported by clinicians during therapy sessions with their clients. Empirical refers to the scientific studies completed using primarily a quantitative methodology with either a quasi-experimental, comparative or correlational design. Qualitative refers to studies from a

Due to methodological difficulties in obtaining retrospective data, premorbid characteristics of anorexics cannot be obtained with certainty. However, in three recent studies, researchers have used unique and innovative techniques in attempts to establish reliable data concerning the pre-morbid characteristics. Ratsam (1992) found a(n): a)

---

constructivist paradigm, utilizing primarily a hermeneutic phenomenology methodology. Finally, anecdotal refers to the story-like literature on anorexia, usually describing the life of an anorexic from her perspective (autobiographical) or as told by someone close to her.

high rate of gastrointestinal problems in the early feeding history; b) high rate of personality disorder (67% anorexic vs. 27% comparison), primarily obsessive-compulsive (35% confirmed diagnosis, 25% subthreshold); c) over-representative strong concern about their own physical appearance; and d) high incidence of depressed mood, especially noted at onset of anorectic symptoms. Using a similar research design, Atkins and Silber (1994) found concurring rates of premorbid medical problems (33%), personality pathology (71%) of various types (obsessive-compulsive, anxiety, narcissistic and borderline), and depressed mood occurring at the time of onset of anorexia nervosa. The third study utilized a risk-factor model (Leon, Fulkerson, Perry and Cudeck, 1993). The results from this study indicated that the young females in the highest risk category displayed significantly elevated scores on body dissatisfaction, negative emotionality and lack of interoceptive awareness.

Atkins and Silber (1993), equated the pre-morbid symptoms and traits in an anorexic with those outlined by Green and Solnit (1964) in the "vulnerable child syndrome" (p. 215). The syndrome is characterized by parental anxiety and disturbances in the child's psychosocial development. Atkins and Silber (1993) applied this to anorexia nervosa, indicating that the parents may view the child as fragile and become overprotective. Parental depression may accompany the situation, creating a condition which may result in a "discouragement of the developmental thrust" (p. 215), and ripe for the development of a psychosocial illness.

Prevalence

Anorexia Nervosa is appearing at an alarming rate in modern industrial societies (Banks, 1992; Gremillion, 1992; Turner, 1990). The majority of studies indicate that the prevalence of anorexia nervosa in the general population today, is as high as one in every one hundred females. In some special populations such as ballet dancers, gymnasts and private boarding school populations, the incidence has been reported as high as 6 - 7% (Butler, 1988; le Garge, Tibbs & Noakes, 1994; Thompson, 1993).

Most studies on the prevalence of anorexia, report that the disorder affects predominantly adolescents females (Banks, 1992; Fraad, 1990; Gremillion, 1992; Hsu, 1990; Mahowald, 1992). While it is believed the disorder is most prevalent in Caucasian females, recent cross-cultural studies indicate the prevalence in Orientals in Japan and Hong-Kong is approaching that of the European and North American population (Mukai, Cargo & Shisslak, 1994; Pate, Pumariega, Hestern & Garner, 1992). Recent studies have indicated that the incidence of anorexia is increasing, and is also noted in older women and non-white individuals (Gordon, 1988; Pate et al., 1992; Yates, Sieleni, Edelstein & Hyler, 1989). Approximately 10% of reported cases of anorexia are males (Garfinkel, 1991; Hsu, 1990). The present paper will be limited to an exploration of female anorexics.

Family Characteristics

Clinical reports on demographic variables of families with an anorexic patient, suggest most are upper-middle class, intact families (Bruch, 1988; Sours, 1980; Stierlin & Weber, 1989; Kog & Vandereycken, 1989). Although this observation has been controversial (Pate et al., 1992), demographic data from most studies indicate that few anorexics come from lower socio-economic status families (Hsu, 1990; Kog & Vandereycken, 1989; Manz, Deter & Herzog, 1992).

Many clinical reports, and an increasing number of empirical studies, suggest that the families of anorexics often preserve Western culture's ideal of self-discipline, independence, competitiveness, assertiveness, material wealth and perfectionism as a standard of conduct (Bruch, 1988; Boskind-White & White, 1983; Fraad, 1990; Mahowald, 1992; Pate et al., 1993). Although the validity of this claim has been questioned, recent studies on anorexia nervosa in non-white populations, have found that these families have generally assimilated mainstream Western culture, displaying equally competitive, materialistic ideals (Abrams, Allen & Grey, 1993; Pate et al., 1992). Similarly, in a recent large study of dieting behaviors among adolescent girls in North America, a strong positive correlation was found between higher socio-economic status and abnormal attitudes towards food, weight and body image (Drewnowski, Kurth & Krahn, 1994). The researchers concluded that a high socio-economic status combined with a family environment emphasizing idealistic cultural values may present a risk factor in the development of eating disorders.

Studies investigating family structure have noted that parental age seems to be higher in anorectic families[3] than in normal comparisons (Bruch, 1973, 1988; Hall, 1990; Kog & Vandereycken, 1989; Stierlin & Weber, 1989). This characteristic, however, seems to be evident in other psychiatric disorders and is not specific to anorexia nervosa (Vandereycken, et al. 1989). No significant patterns of birth order, sex or age of siblings has been found in families with an anorexic patient (Gowers, Kadambari & Crisp, 1985; Kog & Vandereycken, 1989).

Little empirical work has been completed on the anorectic population to compare the number of dual vs. single parent families. Numerous clinical reports suggest that the families of anorexics are generally intact and bound by strong ties (Atkins & Silber, 1993; Kog & Vandereycken, 1989; Stierlin & Weber, 1989; Telerant et al., 1992).

One interesting characteristic common to many anorectic families often noted in the clinical data, is the close tie between the immediate family of the anorexic and the extended family. Involvement of the maternal grandparent(s) is particularly noted (Kauffman & Sedeh, 1989; Stierlin & Weber, 1989; Vanderlinden, Pedernia & Vandereycken, 1989; White, 1983).

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[3] The term "anorectic family" refers to a family with a family member suffering from anorexia nervosa. It does not imply that the entire family is anorexic.

In summary, anorectic families seem to be predominately upper-middle class, intact families, with no specific structural characteristics. Heron & Leuhep (1984) state that the families of anorexics appear to be "happy families" (p. 9).

A Brief Description of Theories and Treatments from a Historical Perspective

To set the stage for a discussion of prognosis in anorexia nervosa, a brief historical overview of the theories and therapies will be presented. Each of the theories and treatment approaches described here will be elaborated on in the following chapters of the thesis.

The first clinical reference to anorexia nervosa in the literature was recorded by Gull in 1873. He believed the illness was closely related to hysteria, which was believed to originate from the peculiarities of female physiology. Upon discovery that the illness occasionally occurred in males, Gull labelled the disorder anorexia nervosa, meaning a nervous lack of appetite (Gremillion, 1992). At about the same time, Lasegue (1874) described a similar disease and referred to it as "l'anorexia hysterique", believing the anorexia, or loss of appetite was triggered by emotional crisis of the family or frustration of unfulfilled sexual expectations (Turner, 1990). Treatments included patient removal from the family, complete bed rest, curing of digestive problems with magical tonics and forced refeeding (Turner, 1990).

During the early 1900's, anorexia was believed to be related to Simmonds' disease and was often treated as pituitary and/or thyroid dysfunction. Treatments included electroconvulsive therapy, corticosteroids, pituitary extracts and prefrontal lobotomy (Turner, 1990). As antipsychotic medications became more available, they became a popular form of treatment (Gremillion, 1992).

With the growing influence of Freudian psychology during the early to mid 1900's, psychoanalytic theories became a popular explanation for anorexia nervosa. Based on the assumption that the anorexic's loss of appetite was due to underdeveloped sexuality, loss of libido or fear of oral impregnation by their father, traditional, intensive psychoanalysis was the preferred form of treatment (Johnson, 1991; Wilson, Hogan & Mintz, 1991; Turner, 1990).

During the 1950 - 1960's, behavioral models became prevalent in response to the apparent ineffectiveness of psychoanalytic techniques. Behaviorists believed that any behavior that is learned may be unlearned through proper behavioral management. Behaviorism provided a quick cure and was therefore assumed more desirable. Some present day treatment programs continue to utilize behavior therapy. Although there seems to be quick positive results with behavioral programs, the long term effectiveness is questionable (Gremillion, 1992).

From the early seventies until present, considerable research on anorexia has appeared in the literature. Numerous etiological theories were proposed and began to drive a multitude of therapy theories. These included the psychodynamic approach (Bruch, 1973, 1988); cognitive-behavioral approach (Garfinkel & Garner, 1983; Garner & Bemis, 1985); nutritive therapies (Levenkron, 1982, 1985; Reiff & Reiff, 1992); medical and psychopharmaceutical intervention (Hall, 1990; Eckert & Mitchell, 1990; Garfinkel & Garner, 1988; Walsh, 1988); family systems approaches

(Dare, 1985; Minuchin, Roseman & Baker, 1978; Selvini-Palazolli, 1978; Stierlin & Weber, 1989; White, 1983); and multidimensional approaches (Kennedy & Garfinkel, 1992; Shekter-Wolfson & Kennedy, 1991; Vandereycken, Kog and Vanderlinden, 1989). All of these approaches are still utilized today, some independently, and some combined into an interdisciplinary treatment program (Kennedy & Shapiro, 1993).

Feminist analysis of anorexia nervosa began to appear in the literature in the late 1970's and early 1980's. Beginning with the works of Boskind-Lindahl (1976), Boskind-White & White (1983), Orbach (1986), Spignesi (1986) and Beattie (1988), feminist critiques of mainstream etiological and therapy theories have become more recognized in the literature. A variety of therapeutic approaches have been proposed from a feminist perspective, including psychoanalytic (Zerbe, 1993), psychodynamic (Kearney-Cooke, 1991; Orbach, 1985; 1986), and cognitive-behavioral (Walker, 1990). Because the application of a feminist perspective in the treatment of anorexia has been recent, there have not been long-term follow-up studies completed.

Evaluations of the effectiveness of most of the treatment approaches mentioned above have been attempted. Many of the evaluations were completed by the clinician(s) themselves, and although most claimed positive results from their therapeutic approach, long term follow-up studies provide less optimistic results. Unfortunately, from the outcome variables presented below, present methods of intervention and treatment seem to be ineffective.

Prognosis

Prognosis for anorexia nervosa victims is not good. Of the total number of reported cases, it is estimated that approximately 40% recover, 45% will revert to some form of chronic or subclinical anorexia nervosa and 15% will die (Herzog, Rathner et al., 1992). "Recovered" refers to those who fulfill the criterion of the "good or intermediate outcome" categories of the Morgan-Russell Assessment Schedule (Morgan & Russell, 1975). A "good" outcome indicates that individual's weight is well within 85% of normal range, regular menstruation has resumed and eating has normalized without abstinence, bingeing or vomiting. The criterion for an "intermediate" outcome are, weight is restored to at or near normal (a weight gain of at least

10%), menstruation has resumed but may be irregular, but abnormal patterns of eating with possible abstinence, bingeing, vomiting and/or laxative abuse may still be present. Those who remain below 85% of normal weight, do not regain menstruation, and continue to display DSM III-R symptoms of anorexia are classified in the "poor outcome" category. It is important to note, however, that the definition of "recovered" is ambiguous (Shaw & Garfinkel, 1990; Vandereycken & Meerman, 1992). Although individuals may be classified in the "good" outcome category at the time of study, many may relapse, regressing into abnormal patterns towards food, weight, and body image, or may develop other psychosomatic conditions (Russell, 1992).

The most recent outcome studies have traced patients over a period of 15 - 30 years (Deter, Herzog & Petzold, 1992; Herzog, Deter et al., 1992; Ratnasuriya Eisler, Szmukler & Russell et al., 1991; Rosenvinge & Mouland, 1990; Steinhausen, Rauss-Mason & Seidel, 1991; Theander, 1992). Because there seems to be a tendency for many anorexic victims to relapse, these studies provide the most reliable data. In addition to the Morgan-Russell criterion as a measure of outcome, these studies also include assessments for a variety of psychological and social parameters. Although the recovery rate has been estimated at 40%, many of these individuals at a 20 year follow-up had developed bulimia (40%) or other forms of abnormal eating behaviours, frequently demonstrated deviant psychotic behaviours (60%), and were socially withdrawn. Additional serious and irreversible medical complications were also evident in some cases, including disabling osteoporosis, renal insufficiency and gastrointestinal complications (Herzog, Deter et al., 1992; Takei, et al., 1989; Zwaan & Mitchell, 1993). Considering the physical, psychological and social parameters, Ratnasuriya and colleagues (1991) and Steinhausen and colleagues (1991) report that only about 10% of the patients in their study were able to completely recover, and live normal happy lives.

A fatal outcome has been estimated between 10 - 15% (Butler, 1988; Gordon, 1988; Herzog, Rathner et al., 1992; Herzog, Deter et al., 1992; Ratnasuriya et al., 1991; Steinhausen et al., 1991; Theander, 1992). About half of the reported deaths are due to starvation effects, and about half are reported as suicides (Butler, 1988; Hsu, 1990; Herzog, Ratner et al., 1992).

Summary

Anorexia nervosa is a very serious, complicated illness that is difficult to cure. The disorder typically develops at adolescence and can be debilitating for the rest of the individual's life. Past and present treatments have produced few positive results. Clinicians, victims and their families remain confused and frustrated by the enigmatic nature of the illness.

In the following chapter, a thorough review of existing literature will be presented. The review will focus on a presentation of proposed theories and a discussion of the clinical and empirical data compiled in attempts to support each of the proposed theories. A brief discussion of the contributions of each theory to our understanding of the illness will be presented. Likewise, the major limitations of each perspective will be outlined. In the final section of the chapter, a brief discussion of the methodological difficulties will be outlined and an overview of the proposed human ecology framework presented.

CHAPTER III: LITERATURE REVIEW

A REVIEW OF THE MAJOR THEORIES

In the following section of the thesis, extant theories and approaches of anorexia nervosa found in the literature will be presented and critiqued. An emphasis on the contributions and limitations of each theory towards understanding of anorexia will be outlined.

Medical Model

Irregularities in the hypothalamus have been examined as a possible contributing factor to the development of anorexia nervosa. The hypothalamus is believed to control various functions of the body, including many internal conditions such as hunger and satiation, and certain aspects of behaviour (Guyton, 1981). Malfunction of the hypothalamus in anorexia nervosa has been explored in reference to its control over two of these functions: hunger and menstruation.

Inadequate hypothalamic control over hunger and satiation has been proposed as the cause of the abnormal eating patterns associated with anorexia nervosa (Liebowitz, 1983). Although neurotransmitter abnormalities which may be associated with hypothalamic dysfunction have been found in anorexics (Baranowska, Rozbicka, Jeske & Abdel-Fettah, 1984; Halmi, Dekirmenjian, Davis, Casper & Goldberg, 1978; Kaye, Ebert & Lake, 1988; Sheinin, 1988) the exact mechanism remains ambiguous (Golden & Shenker, 1994). Irregularities in weight resulting from decreased caloric intake, increased exercise and decreased body fat, are correlated with hypothalamic dysfunction, but the nature of the relationship between this and neurotransmitter abnormalities has yet to be discovered. To date, therefore, there is insufficient evidence to conclude that hypothalamic dysfunction is the cause of anorexia nervosa - anorexia nervosa may be the cause of hypothalamic dysfunction. The issue remains controversial (Bhanji & Mattingly, 1988; Gremillion, 1992; Golden & Shenker, 1994; Hsu, 1988).

The hypothalamic mechanism which controls aspects of hormonal secretions in the anterior pituitary gland has also been proposed as a main contributant to the development of anorexia nervosa. This is based on the observation that amenorrhea may be evident up to three months prior to the actual onset of anorexia nervosa, resulting in a psychobiological rejection of maturity (Crisp, 1980; Sours, 1980). Amenorrhea prior to the onset of anorexia nervosa, however, is evident in only a small portion of patients (Hsu, 1988). Whether the psychological fears towards sexual development and weight loss associated with anorexia are a result of, or a cause of hypothalamic dysfunction remains ambiguous (Banks, 1992; Brown, 1983; Balaa, 1984; Bhanji & Mattingly, 1988; Gremillion, 1992; Kerr, Skok & McLaughlin, 1992; Hsu, 1988; Neuman & Halverson, 1983).

More research is needed to determine the relationship between hypothalamic dysfunction and anorexia nervosa. Although there is empirical evidence of abnormal functioning of the hypothalamus in anorexics, the nature of the relationship has not yet been determined (Goldner & Shenker, 1994). Thus, the primary hypothalamic dysfunction theory as an etiological model of anorexia nervosa, is questionable.

Activity Anorexia and the Effects of Starvation

"Activity Anorexia" is a physiologically based theory of anorexia nervosa, that has recently become recognised in the literature. Based on studies completed on laboratory animals and on observations of human athletes, activity anorexia refers to a spiralling pattern of nutrition restricting behaviours coupled with excessive physical activity. The result is an anorectic syndrome. The combination of reduced caloric intake with excessive exercise is believed to cause reduced appetite and increased desire for physical activity. As the cycle continues, the individual becomes less interested in food, increasingly obsessed with exercise, and the starvation effect takes over. If the cycle is not broken the result is severe emaciation, bodily system breakdown, and death (Epling & Pierce, 1991; Epling, Pierce & Stefan, 1983).

In all other major theories describing anorexia nervosa, excessive physical activity is believed to be a secondary symptom. Proponents of the activity anorexia theory believe excessive physical activity is primary (Epling et al., 1983; Epling & Pierce, 1991). Epling and colleagues (1983, 1991) believe that individuals in today's society are driven by societal values into obsessive behaviours towards fitness and nutrition. Spurred by this societal pressure, an individual begins to restrict food intake and increase exercise to obtain a fashion model-like physique. The combination of these two variables results in further loss of appetite and drive towards increased activity. Although not presented as such, the theory these scientists propose is both psycho-social and physiologically based.

A number of clinical observations of anorexics have made reference to hyperactivity in the majority of patients (Kron, Katz, Gorzynski & Wiener, 1978; Crisp, 1983; Romero, 1984; Dally, Gomez & Isaacs, 1979). It seems that an anorexic becomes more active as food intake and weight are reduced. These observations of behaviour seem to fit with the characteristics described by Epling and his colleagues (1983, 1991). Physiologically, however, the syndrome does not fit with the well supported energy balance theory, which suggests an individual's natural mechanisms will adjust physical activity to nutrient intake, or will adjust appetite and desire for nutrients to compensate for required fuels (Whitney & Hamilton, 1987). Another factor compelling individuals to exercise excessively despite severe energy depletion must be involved.

Proponents of activity anorexia have attempted to provide partial support for the theory through an explanation of the biological and psychological effects of starvation (Epling & Pierce, 1991). The effects of starvation were initially identified in a study by Keys, Brozed, Henschel, Mickelson and Taylor (1950). These researchers placed 36 healthy male volunteers on a strict food restriction program to determine the effects of starvation on the behaviour and emotions of human beings. The food restriction continued until the subjects weight had reduced by at least 25%. Keys and associates noted these starved young men demonstrated consistent patterns of behaviour and affect including: 1) social isolation; 2) decreased verbalization of feelings; 3) over-compliance; 4) depressed affect; 5) food preoccupation; 6) apathy; and 7) unusual eating behaviours when fed (including bulimic responses).

Two studies have been completed to determine the similarities between Keys Starvation Syndrome and anorectic symptoms (Maloney, Brunner, Winget & Farell, 1983; Garfinkel & Kaplan, 1985). The results seem to imply the effects of starvation may contribute to the difficult behaviours and emotions demonstrated by severely emaciated anorexic victims. Garfinkel and Kaplan (1985) concluded from their study that an individual proceeds with the diet to a point beyond which she has cognitive control. At this point the effects of starvation take over and "tend to produce a self-perpetuating disorder" (p. 661). Little research has been completed to support this theory empirically. Most individuals who have been starved will eat when re-fed gradually, return to normal weight, and regain normal attitudes towards food and weight (Whitney & Hamilton, 1987). With anorexia nervosa, re-feeding is a difficult process, and is often met with intense rejection. Even upon regaining normal weight, abnormal attitudes towards food and weight continue (Engel, 1989; Rathner, 1992).

The biological effects of starvation may help to explain some of the abnormal behavioural patterns of anorexia nervosa, but whether these effects provide support for the activity anorexia theory is debatable. Activity anorexia may help to explain why individuals exercise excessively, and the effects of starvation may help to explain abnormal behavioural patterns in severe anorexics. Neither activity anorexia nor the effects of starvation explain why the disorder begins, or why complete recovery is difficult to obtain. Both may help to explain perpetuation and maintenance of the disorder, but neither provide an explanation of etiological or predisposing factors.

Behavioural Models

Although behavioural models do not propose physiological irregularities as the cause of anorexia nervosa, they are generally categorised in the medical framework because of the use of a behavioural perspective in hospital treatment programs (Thompson, 1993; Reiff & Reiff, 1992). The underlying assumptions of a behavioural model are that unhealthy (abnormal) eating habits were learned and reinforced and may be unlearned and replaced with healthy (normal) habits. Proponents of the behavioural model (Argras, Barlow, Chapin, Abel & Leitenberg, 1974; Dresser & Boisaubin, 1986; Kuechier & Hamptom, 1988; Levendunsky & Dooley, 1985) suggest that anorexia nervosa results from a series of positive and negative responses individuals receive from others for their behaviours throughout their lives. Behavioural theorists view the anorexic's self-starvation as a product of positive reinforcement from others for her thin appearance. As the anorexic begins to lose weight, she receives positive reinforcements for her weight loss (ie., "You look great since you've lost some weight"), which lead to continued efforts to receive the positive reinforcement through further weight loss (Allyon, Haughton, & Osmond, 1964; Dresser & Boisaubin, 1986; Levendunsky & Dooley, 1985). Although the theory has some utility in explaining why individuals may continue weight loss beyond a healthy norm, how or why only some individuals are susceptible to the external pressures, is not addressed (De Silva, 1995; Kuechier & Hamptom, 1988).

Genetic Transmission Theory

The notion that genetic factors may play an important role in the development of anorexia nervosa has received an increasing amount of attention in the past few decades. Studies to determine the possible genetic influence pose a number of challenges, but with access to increasingly technical statistical procedures, more rigorous studies have been possible in the past few years (Woodside, 1993; Schepank, 1992).

Research to determine a genetic link to a symptom are generally conducted in three ways. The first involve familial studies to determine the degree to which a particular syndrome is evident in the first and second degree relatives of a proband. Data for these studies may be gathered through a direct interview technique (family studies), or through secondary data, where the proband is asked to provide the familial data (family history). A third technique, which provides data of the greatest specificity to the research question, are twin studies. These studies involve locating a pair of twins where at least one suffers from the particular syndrome. Assessments are made to determine if the other twin displays concordance for the same syndrome. The pairs of twins must be separated into categories of mono vs. dizygosity for comparison. The most reliable studies to determine genetic vs. environmental factors vs. combined genetic/environmental roots to an illness, are those where monozygotic twins have been separated from birth (Schepank, 1992; Woodside, 1993).

Conducting twin studies of anorectic populations presents considerable challenge to researchers due to numerous methodological difficulties. Small sample sizes in anorexia research are usual (Ohler-Madsen, 1990b). Attempting to locate twins in this already small sample size, ensuring that both zygosity categories are represented, and trying to locate sets of symptomatic monozygotic twins that have been reared apart, is no small task (Schepank, 1992). A few researchers, however, have accepted the challenge, and the empirical data to date is impressive (Woodside, 1993).

A number of studies have been completed to assess the degree to which eating disorders and affective disorders are found in the families of probands. The basis to these studies is the question of whether anorexia nervosa is a distinct disorder, or a variant of some other disorder (Woodside, Rockert & Garfinkel, 1991). Because there tends to be a high rate of comorbidity between eating disorders and other affective, anxiety, substance abuse and psychiatric disorders (Halmi et al., 1991; Halmi, 1995; Sohlberg & Strober, 1994), some researchers suggest it is likely anorexia is a variant of these other syndromes and therefore may be studied for the possibility of a genetic link (Woodside, 1993).

The following review of the genetic literature in anorexia nervosa, has been divided into three sections: a) prevalence of eating pathology in families of anorectics; b) relationship between affective disorders and eating disorders; and c) twin studies in anorexia nervosa.

Prevalence of Eating Pathology in Families of Anorectics

A number of studies have examined immediate family members of anorexics to determine the prevalence of some type of eating disorder. Recall that the incidence of anorexia nervosa in the general female population is approximately 1% and is 6 - 7 % in special populations such as ballet dancers, gymnasts and private boarding school populations. It has been generally agreed by researchers that the incidence of anorexia in siblings (primarily sisters) is approximately 6 - 7% (Balaa, 1984; Garfinkel & Garner, 1982; Crisp, Hall & Holland, 1985; Strober, Lampert, Morrell, Burroughs & Jacobs, 1990). Crisp and colleagues (1985) also noted that 14% of mothers and 7% of fathers had displayed anorectic tendencies at some point in their lives. The prevalence of obesity in anorectic families did not differ significantly from the incidence of obesity in the general population. Some type of peculiar eating habits or strict dietary regimes were reported in 6 - 27% of anorectic families (Crisp, 1980; Kalucy, Crisp & Harding, 1977; Logue, Crowe & Bean, 1989; Strober, Morrell, Burroughs, Silkin, & Jacobs, 1985; Strober et al., 1990; Strober & Humphrey, 1987). These statistics, however, may be misleading as the studies lack appropriate matched comparison groups and clear definitions of 'peculiar eating habits' or 'strict dietary regimes'. In addition, Strober and colleagues (1985) found a higher incidence of eating disorders in relatives of bulimic rather than anorexic probands (13% vs. 6% respectively), which may suggest the broad range of findings of eating disorders in anorectic families may have been due to a lack of control for associated eating disorders. Lask and Bryant-Waugh (1992) state in their review of the literature, that anorexia nervosa is roughly eight times more common in female first-degree relatives of probands with anorexia than in the general population. Interestingly, this figure is consistent with the incidence of anorexia nervosa in special populations such as ballet dancers, gymnasts and private boarding school populations. This similarity in incidence may suggest the importance of considering the role of familial and community values and beliefs as a contributing factor to the develpment of anorexia nervosa.

Relationship between Anorexia Nervosa and Affective Disorders

A number of researchers have attempted to correlate the incidence of anorexia nervosa with the prevalence of affective disorders in first and second order relatives. Results seem to indicate a higher occurrence of affective disorders in anorectic families as compared to normal comparison groups. Strober and Humphrey (1987) reported a four times greater incidence of affective disorders in relatives of anorexics. Reviewing the results of five epidemiological studies, the rate of prevalence of affective disorders in immediate or extended family members of anorexics ranged from 22 - 30%. This figure is high compared o the 2 - 10% prevalence rate of affective disorders in the general population (Logue et al., 1989; Cantwell, Sturzenberger & Burroughs, Salkin & Grun, 1980; Morgan & Russell, 1975; Rivinus et al., 1984; Strober, Salkin, Burroughs & Morrell, 1982; Swift, Andrews & Barklage, 1986). The incidence of depression in the parent(s) of early-onset anorexics was found to be even greater (62%) (Atkins & Silber, 1993). Interestingly, the incidence of affective disorders in the families of anorexic/bulimics was found to be twice as high as restricting anorexics, at rates of 13% and 6%, respectively (Strober et al., 1982).

The repeated observations of a higher rate of affective disorders in the families of eating disordered patients, while intriguing, have not controlled for the equally common observation of high rates of affective disturbance in the probands themselves. Strober, Lampert, Morrell, Burroughs and Jacobs (1990) found that elevated rates of depression in first-degree relatives of anorectic patients was evident only when the anorexic also had comorbid depression. Atkins and Silber (1993) found similar results. Is the depression then, a result of genetic transmission or environmental causes (Woodside, 1993)?

Although studies suggest a possible correlation between anorexia and affective disorders, the results of the studies must be interpreted with caution. Woodside (1993) pointed out that applying logistical regression analytic techniques to the data deriving adjusted odds ratios, failed to find any significant differences for rates of affective disorders in anorexia nervosa families as compared to normal comparison families. Hence, there does not seem to be sufficient evidence to conclude they are both manifestations of a common underlying genetic vulnerability (Woodside, 1993). The possible contribution of pathological psychosocial patterns within the family must also be considered. Numerous authors (Strober & Humphrey, 1987; Garfinkel & Garner, 1983; Swift et al., 1986; Logue et al., 1989; Woodside, 1993) seem to agree that evidence from family data indicates genetic susceptibility to psychosocial disturbances in behaviour may be possible, but this must be coupled with environmental factors in the development of an eating disorder.

Twin Studies

Studies completed on dizygotic and monozygotic twins are suggestive of a possible genetic predisposition to anorexia nervosa. Concordance rates for dizygotic twins is approximately 7%, similar to the rates reported in non-twin siblings and in special populations (Crisp et al., 1985; Garfinkel & Garner, 1983; Strober & Humphrey, 1987; Schepank, 1992; Woodside, 1993). Studies examining the incidence of anorexia in monozygotic twins raised together identify concordance rates of 30 - 57% of reported cases (Holland, Murray, Russell & Crisp, 1984; Holland, Sicotte & Treasure, 1988; Kog & Vandereycken, 1989; Schepank, 1992; Woodside 1993). The high incidence rates of anorexia in monozygotic twins may imply possible genetic vulnerabilities to the disorder, however, careful consideration of methodological issues in this research is important before conclusions may be drawn. In a summary of this literature, Kog and Vandereycken (1989) have identified three notable methodological concerns. First, diagnostic criterion for homozygosity is inconsistent. Without accuracy in identifying zygosity, it is possible for dizygotic twins concordant for anorexia nervosa to be included in the sample of concordant monozygotic twins. This may provide more support for a genetic linkage than is actually evident. Second, because it is difficult to obtain samples for twin studies in a rare illness such as anorexia nervosa, there may be a tendency for the sample to be recruited in favour of monozygotic and concordant pairs. This procedure may bias the sample (Treasure & Holland, 1995). Finally, most of the results of these studies are stated in percentages. Percentages provide questionable evidence of statistical significance, as sample sizes are generally small and comparison groups may be lacking (Shaw & Garfinkel, 1990). Care must be taken in the interpretation of statistics reported in percentages.

Regardless of methodological difficulties or weaknesses in studies investigating genetic transmission, concordance rates for monozygotic twins of 55% (Holland et al., 1984), 56% (Holland et al., 1988) and 57% (Schepank, 1992) compared to dizygotic concordance rates of 7%, 5% and 9%

respectively, cannot be ignored. The vast variation of concordance rates between zygosities implies some form of genetic link must be operating. However, because none of the twin studies have studied a sample of monozygotic twins reared apart, it is still not possible to conclude that these results were not partially influenced by environmental factors. Considering that the incidence of anorexia nervosa has increased so dramatically in the past few decades, and that the incidence of anorexia in siblings is the same as the incidence of anorexia in special populations, it seems something more than genetics must be implied.

Because anorexia nervosa is a relativiely new illness, little is known about the offspring of anorexics. Modern statistical techniques, however, have estimated heritability for anorexia nervosa to be 80% for young-onset anorexia (Holland et al., 1988). Strober and colleague's (1990) estimates were similarly high at 64% liability for the development of anorexia nervosa. Empirical investigations of these estimates will not be able to be completed until the children of anorexics who have been followed, may be assessed.

Following a theory of genetics, it may be possible that a genetic susceptibility to an eating/affective disorder remains dormant until triggered by some environmental factor (Woodside, 1993). If, for example, a genetic susceptibility exists for an eating disorder, it may remain inactive until specific environmental conditions activate its expression. Could this same genetic predisposition combine with today's societal messages of perfectionism for women today as the thin, fit, successful woman resulting in anorexia nervosa? Could the genetic susceptibility be triggered by a stress reaction, and be a genetically based biological response to stress? The mechanisms of genetic influence in the development of anorexia nervosa are puzzling, but warrant further investigation. It seems, however, that genetics alone cannot fully explain the illness - environmental factors must be at least partially involved (Hilburn & Worbovow, 1990; Woodside, 1993; Schepank, 1992).

In summary of the twin studies and of heritability, it seems that there may be a genetic link in the anorexia puzzle. However, results of studies must be interpreted with caution, and the shared influence of environmental factors must be carefully considered. Further research is necessary to clarify the role of genetics and determine the interactions between genetics and the environmental factors.

Socio-Cultural Theories

Proponents of socio-cultural theories of anorexia nervosa propose that the illness is culture-bound and develops in response to socio-cultural pressures. Evidence that supports this theory can be summarised according to (1) the current emphasis on slimness, (2) the contradictory roles of women in modern, male-dominated society, and (3) the vulnerability of the white upper-class adolescent female (Banks, 1992; Gremillion, 1992; Kerr et al., 1992; Hsu, 1988).

Two theories have been formulated which are based from a socio-cultural perspective. The first is the cognitive-behavioural approach, and the second is the feminist approach.

Cognitive-Behavioural Approach

The cognitive-behavioural approach is an extension of the behavioural perspective and incorporates cognitive processes with behavioural responses in order to explain anorexia nervosa. An individual initially believes that societal or peer culture acceptance is gained by losing weight and thereby achieving the thin ideal (Garner & Bemis, 1982, 1985; Garner, Olmsted & Garfinkel, 1983; Garfinkel & Garner, 1983; Kuechler & Hampton, 1988). This attitude, presumed to be "distorted" or "abnormal", is positively reinforced by praise from others, and from feelings of self-control. Through her weight loss, the young female comes to believe she can control her own growth and control the environment in which she lives. Her little girl-like physique becomes a protective barrier from external pressures, a safety margin which allows her to receive attention from others, yet live in isolation within her own world. The anorexic's behaviours and cognitions become autonomous (Crisp, 1980; Garner & Bremis, 1985).

Proponents of the cognitive-behavioural approach propose that modern socio-cultural values are the basis to the irrational thought patterns and consequent behaviours characteristic of eating disorders. Society’s emphasis on thinness, fitness and materialism, are believed to be the cause of the anorexic's distorted beliefs. Through deficits or weaknesses in her self, it is assumed that the anorexic succumbed to these societal pressures, and developed irrational attitudes and beliefs which are displayed behaviourally through the eating disorder(De Silva, 1995; Garner & Bemis, 1982, 1985; Hsu, 1990; Kuechler & Hampton, 1988).

The cognitive-behavioural approach helps to identify reasons for individuals to use dieting as a means of gaining social acceptance. However, the theory does not identify why these individuals are motivated to such extremes, and why the disorder effects only certain individuals. The theory fails to explain why certain individuals are vulnerable to the development of the disorder (Banks, 1992; De Silva, 1995; Gremillion, 1992).

Feminist Perspective

The importance of physical attractiveness in Western society is undeniable. In the female this attractiveness has taken the form of slimness. The value of slimness is pervasive in our society - in magazines, in advertising, in movies, T.V. and radio, and on billboards. Diet advertisements, weight loss specials, and get thin quick routines cover the front pages of almost any available woman's magazine.

For women, health, fitness, beauty and success are all equated with the slim, well dressed, career woman.

Garfinkel and Garner (1982) found that this emphasis on thinness and dieting occurs in a population that is becoming heavier. Weight statistics over the past 20 years have indicated an increase in average weight for women in all height categories below the age of 30 years. The pressure on women to diet and appear slim thus seems relentless. These pressures may precipitate the development of anorexia nervosa and/or bulimia, and it has been argued that the predominance of eating disorders in upper-middle class females may confirm this hypothesis (Drewnowski, Kurth & Krahn, 1994; Huon, 1994; Kerr, 1992; Furnham & Hume-Wright, 1992).

Early feminists proposed anorexia is a woman's issue which has evolved over history due to societal expectations of women (Boskind-Lindahl, 1976; Beattie, 1988; Orbach, 1979, 1985; Woodman, 1980). The present socio-cultural image of the "perfect female" is the slim, trim, upwardly mobile, self-assured career woman. Young women view this image as a role model, and determine their self worth on their ability to (or not to) achieve this image (Rothblum, 1993).

The message many young girls receive from their mothers, however, may be quite different. Boskind-White and White (1983) indicate that young girls receive three strong messages from their mothers. The first message concerns personality, the second capability, and the third concerns the primary role of an adult woman. With regards to the first message, true femininity involves being "sweet, expressive, nurturing, co-operative, pretty and passive" (p. 65). With regards to capabilities, the daughter "knows she will be less capable and important than most men" (p. 65). With regard to her future roles, she "knows she will be a wife and mother" (p. 65). The daughter receives these messages by what she *sees* of her mother in the female role. But what she *hears* from her mother is that she should strive to be a strong, outgoing career woman, achieving anything she desires; to be the woman her mother never had the chance to be (Beattie, 1988; Selvini-Palazzoli, 1978; Restifo, 1986). The result is confusion and a lack of identity. The anorexic strives for control and perfectionism, afraid of living up to the expectations of true womanhood. The identity crisis becomes acute (Boskind-White & White, 1983; Gordon, 1988).

Recent feminist theorists propose that anorexia evolves from more than the role confusion resulting from societal pressures to be a particular type of women. These theorists (Gremillion, 1992; Kearney-Cooke & Striegel-Moore, 1994; Mahowald, 1992; Fraad, 1990) propose that anorexia is a representation of the ills of our society. The dualisms of our male/female, objective/subjective, individualistic/relational dichotomous world are borne out in the anorexic as she becomes a living example of the ills of the dualities of our society.

As stated by Gremillion (1992):

> "Anorexia cannot be 'cured' in the traditional sense because it not only embodies the status quo, but also calls it into question. Therapists' attempts to correct the anorectic affront her and exacerbate her illness, as she is a tenaciously self-controlled cultural critic. However, it is important to stress the fact that anorexia does not entail a conscious cultural criticism; again, anorectics are themselves enmired in the forms of domination that their illness disrupts and challenges" (p. 58).

The feminist perspective has utility in providing at least a partial explanation as to why young females may starve themselves in modern society. However, since most women in our society face the same pressures, the theories on their own, fail to explain why only some females develop the disorder. Socio-cultural values may provide an avenue through which the young person may channel their frustrations and find ways of overtly demonstrating control and perfectionism. Other factors however, must also contribute to, and precipitate the development of the illness (Banks, 1992; White, 1992).

Summary of the Unidimensional Frameworks

The theories on anorexia nervosa presented thus far, are unidimensional, linear-causality approaches. All of the approaches based from these frameworks seem to provide valuable insight into the complexity of the disorder. Each one contributes to the understanding of possible precipitating or maintenance factors of anorexia. The physiological, behavioral and cognitive-behavioral approaches provide greater understanding of the unusual behavioral and thought patterns characteristic of clinical anorexics. The socio-cultural perspectives help explain why young females striving for perfectionism attempt to achieve a thin ideal through dieting and weight control. The socio-cultural approaches also help to explain why the incidence of anorexia has increased in the past two decades and has become a disorder of late 1900's. Genetic transmission theory, may help to explain why only some individuals are vulnerable to the disorder, but cannot explain what may trigger the vulnerability. Taken alone, none of these theories can explain the complexity of the disorder.

Family Theories

Because the development of an individual is believed to be moulded by the family, it seems that an etiological model of anorexia must incorporate the family milieu (Garfinkel, 1991; Stierlin & Weber, 1989; Vandereycken & Meermann, 1984; Vandereycken, et al., 1989). In the following section, a review of the literature from a pathologic parent-child interaction (psychodynamic) framework and a family systems perspective will be presented.

Pathological Parent-Child Interaction Models (Psychodynamic Theory)

Psychodynamic theory is an extension of traditional psychoanalytic theory and has grown out of linear-causality models of mother and father influences. The relationships are viewed as a series of actions and reactions, each individual's behaviours being influenced by the others. A specific characteristic or parenting behaviour is therefore not viewed as the cause of the disease, but the interaction between the parenting style, the reaction of the daughter and the resulting effects on both individuals are claimed to be the etiological factors in anorexia nervosa (Vandereycken et al., 1989).

The Mother-Daughter Relationship (Psychodynamic Theory)

A pathological relationship between mother and child has been a common theory proposed by many researchers in the field of anorexia nervosa (Beattie, 1988; Boskind-White & White, 1983; Bruch, 1978, 1988; Orbach, 1979, 1986; Selvini-Palazzoli, 1978; Sours, 1980; Spignesi, 1986; Sugarman, Quinlan & Devenis, 1989; Theriot, 1988; Woodman, 1980). The popular psychodynamic approach to anorexia nervosa proposed by Bruch (1973, 1978, 1988), argues that anorexia nervosa is a severe psychological disturbance with its root causes embedded in inappropriate mother-child relationships that develop during infancy, and continue throughout childhood. The over-protecting and over-controlling relationship prevents the child from developing a sense of autonomy and individuation, resulting in the anorexic's obsessive quest for control over her own body (Rakoff, 1983). Anorexia nervosa is believed to develop in response to the interaction between increased life stress during adolescence and the daughter and mother's inadequate coping mechanisms (Bruch, 1973; Johnson & Connors, 1987; Wooley & Wooley, 1985; Rakoff, 1983).

In her most recent publication, Conversations with Anorexics (1988), Bruch describes anorexia as follows:

> "Disturbances in self-concept and in the way experiences are perceived and conceptualized play a significant role in the disorder. While these patients suffer from severe dissatisfaction about themselves and their lives, they transfer this dissatisfaction to the body. The body is then treated like something foreign that needs to be

> protected against getting "fat" and this patients do through excessive discipline and overcontrol." (p. 4)

As a child, the daughter is described as being compliant and submissive to her mother's demands. As she reaches adolescence however, she begins to rebel against her mother's dominance, resulting in feelings of rejection on the part of the mother, and feelings of guilt and shame by the anorexic. The interaction of these two feelings begin a cycle of a love-hate relationship (Boskind-White & White, 1983). The daughter desires freedom and autonomy, but is restricted by the difficulties she faces in separating from her mother. She desires freedom, but is afraid to face the world alone. She loves and desires to protect her mother, yet hates her for her intrusive behaviours. The daughter feels guilt and shame for the way she treats her mother, and desires to live up to her expectations and please her (Bruch, 1988; Beattie, 1988; Fischer, 1989; Scheff, 1989). The daughter lives in a world of confusion, shame and guilt. The anorexic develops an attitude of inferiority about herself, convinced she is "inadequate, mediocre, and despised by others" (Bruch, 1988, p. 6). These feelings may be the result of confused relations with her mother and may lead to obsessive behaviours to prove perfection, to succeed beyond expectations, and to gain approval for herself as an authentic individual. The anorexic's pursuit for thinness is viewed as a "camouflage" of underlying confusion of emotional states and great fear of social disapproval.

As the disease progresses and the anorexic begins to recognize a sense of control over her own body, she begins to "replace interpersonal relationships with an abnormal relationship to body size and food, and uses the successful control over body size for regulation of feeling states" (Casper, 1983, p. 392). Through this mechanism, the anorexic establishes a sense of autonomy and self.

The Father-Daughter Relationship

Although the father daughter relationship is seldom considered in psychodynamic theory, it is important to give attention to the relationship. Little research has been conducted on the relationship between father and daughter. In the early literature on anorexia nervosa, the father was described as weak and ineffectual (Launay et al., 1965; Wold, 1973; Vandereycken et al., 1989). In recent literature, the characteristics of the father are described in three general ways. In some studies, the father is generally described as emotionally constricted, obsessional, moody, withdrawn, passive and reserved. He is viewed as role-oriented, achievement-oriented and distant, communicating with the family only when necessary and usually on disciplinarian topics (Strober and Humphrey, 1987; Humphrey, 1989; Bruch, 1988; Kauffman & Sadeh, 1989). In others, he is described as the opposite - weak, ineffectual and dominated by women (Engel & Stienen, 1988; Rakoff, 1983). Selvini-Palazzoli and Viaro (1988) describe a third father figure as overinvolved and enmeshed in the daughter's life. This description of the father is similar to Engel and Steinen's (1988) description of the "bonding father" (p. 9). This enmeshed father-daughter relationship seems to occur when the mother is overdomineering and demanding and/or the mother-daughter relationship is distant. The father and daughter's lives enmesh as a means of protecting themselves from the mother. It seems evident from any of the descriptions of the father drawn from clinical or qualitative data, that his behaviour is extreme, either dysfunctionally overinvolved or underinvolved; overdomineering or weak and dominated. Often, the father is described as either physically or affectively distant from the family (Atkins & Silber, 1993; Boskind-White & White, 1983; Bruch, 1978; Gilchrist, McFarlane, MacFarlane & Kalucy, 1986; Lewis & MacGuire, 1985; Selvini-Palazzoli & Viaro, 1988; Telerant et al., 1992).

The daughter's reaction to her father is poorly defined in the literature. It seems, however, that regardless of whether the father is over or underinvolved with his daughter, her behaviour towards him is a compulsive drive for his attention and acceptance. She drives herself towards perfection to gain recognition from her father and to be the "best little girl in the world" (Levenkron, 1978). The anorexic enjoys the attention she receives from her father as she begins to lose weight, and sees this reward as reason to continue the behaviour (Boskind-White & White, 1983; Ohler-Madsen, 1990a; Selvini-Palazzoli & Viaro, 1988). As the father attempts to encourage or even force his daughter to eat, this very attention aimed at helping the problem, may instead be a perpetuating factor of the disorder (Bruch, 1988; Ohler-Madsen, 1990a, 1992b; Telerant et al., 1992).

Clinical and Empirical Support

Clinical support for an inappropriate mother-daughter and/or father-daughter relationship has been reported by a number of authors (Atkins & Silber, 1993; Boskind-White & White, 1983; Bruch, 1973, 1978, 1988; Beattie, 1988; Gilchrist et al., 1986; Restifo, 1988; Scheff, 1989; Selvini-Palazzoli & Viaro, 1988; Sugarman et al., 1989; Theriot, 1988; Telerant et al., 1992; Woodman, 1980). Although some of these authors are proponents of family systems theories, their descriptions of interaction in case studies are similar to the interactional patterns identified by the pathological parent-child theories.

Some of the case studies dealt with the mother-daughter relationship alone, and indicated that the relationship throughout the childhood of the daughter was very close. Upon adolescence, the daughter began to reject her mother's overinvolvement in her life. The mother in turn responded to her daughter with increased attempts at control, and reduced empathy and care (Bruch, 1978, 1988; Beattie, 1988; Restifo, 1988; Selvini-Palazzoli & Viaro, 1988). Other case studies or clinical assessments dealt with an inappropriate relationship between the anorexic and both her mother and father (Fischer, 1989; Gilchrist et al., 1986; Restifo, 1988; Scheff, 1989; Selvini-Palazzoli & Viaro, 1988[4]). These descriptions of the family seem to support an overcontrolled mother and removed father figure (Fischer, 1989; Gilchrist et al., 1986; Selvini-Palazzoli & Viaro, 1988), an overinvolved father and dominant controlling mother (Selvini-Palazzoli & Viaro, 1988) and daughter's rejection of mother, and drive for acceptance from father (Fischer, 1989; Minuchin et al., 1978; Selvini-Palazzoli, 1978).

Two studies employed the Parental Bonding Instrument (Parker, Tupling & Brown, 1979) to test the perceptions of the anorexic in regards to her relationship with her mother and father (Calam, Waller, Slade & Newton, 1990; Steiger, Van der Feen, Goldstein & Leichner, 1989). The mother is viewed by her anorexic daughter as less caring and slightly

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4Selvini-Palazolli and Viaro (1988) describe a variety of case studies of anorectic families in this paper. Although the interactive patterns are similar in each of the case studies, the actors are different. Where the mother-daughter relationship in one study was enmeshed and the father-daughter distant, the opposite was true in the second case study presented. A similar situation is true for Restifio (1986) Fischer (1989), and Gilchrist et al. (1986).

more protective than comparison mothers. This may suggest that mother's attempts to regain control of their daughters is perceived by the anorexics as an increase in protection and a decrease in care and empathy (Calam et al., 1989; Steiger et al., 1989). Differences between the eating disordered groups were noted. Specifically, on the protection scale, anorexic/bulimic daughters perceived their mothers as being significantly more protective than the other eating disordered groups. This is interesting as the anorexic/bulimic girls in both studies were older than the restrictor anorexics (Calam et al., 1989; Steiger et al, 1989). Because it has been proposed that anorexia/bulimia often follows classical anorexia (Engel, 1989; Garner et al., 1993), these results may indicate that the relationship between the daughter and the mother changes with the progression of the disorder.

In the two studies using the Parental Bonding Instrument, fathers of anorexic subjects were viewed significantly more protective, and less caring than comparison fathers were viewed by their daughters (Steiner, 1990; Steiger et al., 1989). A "perceived absence of paternal care" was emphasized by Steiger and colleagues

(1989, p. 137). Additional support for a distant father-daughter relationship has been described empirically in a study conducted by Grigg, Friesen and Sheppy (1989) utilizing the Structural Analysis of Social Behaviour. In this study, families of anorexics and normal comparison subjects were categorized into typologies based on cluster scores of each family member's (father, mother, daughter) perceptions of their relationship with the other family members. Seven typologies of families were identified. Of the seven typologies, four describe the father from his own perspective as removed or distant. Of the 22 anorectic families in the sample, 13 fit into these four categories. Two of these categories were comprised only of anorectic families and two consisted of more anorectic than comparison families. Four of the remaining nine anorexics in the sample fell into the "perfect family" category, which describes a warm and caring family environment, but also indicates that the "mother/daughter relationship is clearly closer than the father-daughter relationship" (Grigg et al., 1989, p. 38). Normal families were clustered almost entirely in the remaining two family typologies. It seems, therefore, that the anorectic families were located predominantly in the categories which described the father as removed or distant. This data seems to support the theory that the father is peripheral to the family system.

The Structural Analysis of Social Behaviour (Benjamin, 1974) has also been used to identify the perceptions of anorexics and their parents in terms of their initiating and responding behaviours to each other. A summary of the results of these studies indicate that anorexics perceived their mothers approached them in a friendly controlling manner, but also with somewhat rejecting and neglecting behaviours (Humphrey, 1989, 1990; Humphrey, Apple & Kirschenbaum, 1987; Sheppy, Freisen & Hakstain, 1988). Generally, anorexics reported their fathers approached them with mixed messages of pseudoaffection and pseudohelp, and neglecting and ignoring (Humphrey, 1989, 1990; Sheppy et al., 1988). These results seem to provide additional support for the proposition of an overcontrolling mother-daughter relationship and a distant father-daughter relationship (Humphrey, 1989).

Two other measures, the Separation Anxiety Test and the Defense Style Questionnaire have been employed to operationalize the constructs identified in the pathological parent-interaction theories (Armstrong & Roth, 1989; Friedlander & Siegel, 1990; Smolak & Levine, 1993; Steiner, 1990; Steiger et al., 1989). The results of these studies seem to indicate that anorexics display considerable attachment anxiety and separation depression (Armstrong & Roth, 1989; Smolak & Levine, 1993), and seem to revert to immature defense styles (Steiner, 1990; Steiger et al., 1989). The theoretical basis for these measures would support the proposition that an inappropriate bond between the anorexic and her parent(s), may have led to a regression to immature states (Armstrong & Roth, 1989; Smolak & Levine, 1993; Steiner, 1990; Steiger et al., 1989). These studies therefore seem to support the psychodynamic theory, identifying reasons why an adolescent may regress to more immature states, thus rejecting growth into adulthood.

In summary, it seems that the pathological parent-child interaction theories contribute considerably to the understanding of anorexia nervosa. Most of the empirical support for these theories, however, have been based on the perceptions of the anorexic of her relationship with both parents. To view the relationships alone, or as an isolated causal factor may limit the value of the theories. In only a few of the studies, the parents' perceptions of their relationships with their daughter was also analyzed (Grigg et al., 1989; Humphrey, 1989; Sheppy et al., 1988). The results from these studies, as well as much of the clinical data, seem to suggest that a more systemic approach to the family, viewing the multiple interaction patterns between family members, may be fruitful.

The Family Systems Theories

The family systems theories of anorexia nervosa emphasize the transactions between the various systems of the individual, her family and society. The framework explores pathological transactional relationships within the entire anorectic family system. The family of an anorexic is not characterized by one pathological relationship, but by a combination of a number of pathological transactional patterns between family members, extended family and community (Minuchin et al., 1978; Vandereycken et al., 1989).

A number of theories have been developed based on the family systems theoretical orientation. Two of the most well known theories are Salvador Minuchin and colleagues (1978) structural family systems theory, and Mara Selvini-

Palazzoli 's (1978) communication and transaction theory. A third theory gaining recognition in the literature, is Stierlin and Weber's (1989) theory of family psychodynamics. White (1983) has proposed a fourth transgenerational model of anorectic family functioning. All of these theories have been developed through clinical observations during therapy.

It is important to note that because all of these theories are derived from the same theoretical orientation, the basic premises of the family systems framework are upheld in each theory. Assumptions which form the basis for each of the four theories include:

1. A family is a unit which is greater than the sum of the individuals it comprises.
2. The family system has different properties than do its members. Likewise, the individuals within the family have unique characteristics which are different from the family as a whole.
3. Although families exist as identifiable units, family members have definitions of their unique family system, and their component parts are related through a degree of intimacy (voluntary relational closeness).

4. The family is a part (a sub-system) of larger systems (social and environmental) and is composed of sub-systems (individuals). Families are affected by the larger systems and affect the subsystems that are its parts. Likewise the subsystems affect the family system.
5. Boundaries exist around families and specify who is and who is not a member. Boundaries may be defined as either _closed_ or _open_, depending on the degree of exchange between the system and external systems. All family systems are open to a degree (allow for some exchange with the external environment), but some may be viewed as more open than others. Closed family systems would be defined as families who allow little contact with the external environment and keep almost entirely to themselves.
6. Boundaries also exist around the component parts of the system (the individuals). These boundaries define relational proximity. The degree of openness around individuals within the family system effects the degree to which individuals are

independent and autonomous vs. dependent on and/or responsible for the well-being of themselves and other family members.

7. Roles, or player parts are important within a family system. Each individual has certain roles he/she is expected to fulfil.

8. Change at all levels of systems is inevitable. Families, and the individuals within families deal with these changes through adaptation. Since change at one level in the systems effects other levels, change and adaptation between the levels occurs concurrently, a process identified as "**coevolution**".

9. As a system, families attempt to maintain a balance, and often attempt to keep things the same. This tendency is referred to as maintaining "**homeostasis**" or "**equilibrium**".

10. Families operate in **recursive cycles**. That is, there is no such thing as cause and effect. A does not cause B. Instead, A and B fit together in some combination of AB and what happens cannot be traced back to a causal linkage.

11. Families develop patterns of **recursive cycles** (repeated rules of transformation) of interacting with each other and with the external environment. These patterns for some families may become sacred. Patterns of interacting may be passed through multi generational levels.

The specific theories apply these assumptions in slightly different ways. Although considerable overlap will be noted between the theories, the specific constructs and consequent operationalized hypotheses are distinct. In addition, therapy driven from each of these perspectives has been developed utilizing specific techniques. A full discussion on therapies and the different techniques used in each of the family theories is described fully in the Handbook of Family Therapy: Volume II (Gurman & Kniskern, 1991). In the following section, each of these theories will be described from an etiological perspective, and a description of the empirical investigations of the theories will be presented.

The Structural Family Systems Theory

The structural family systems framework views classical or restricting anorexia nervosa as an individual illness which is actually a symptom of pathological interaction patterns within the family system. The anorexic is believed to be a vulnerable[5] child who, throughout her childhood, has been a coping mechanism or mediator for family conflict. As she reaches adolescence and begins to experience the maturational needs for autonomy and independence, she rebels against the overprotected, enmeshed relations imposed on her by the family. This "change" in the child's interactional patterns with family members, produces a stress which reverberates throughout the family system. In an attempt to maintain the status quo, the family members focus their attention on the anorexic, again detouring conflict resolution. The anorexic is viewed by the family as "the only problem" and underlying transactional issues are further concealed (Minuchin et al., 1978).

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[5] "Vulnerable child" refers to one child within the family, who, due to childhood illness, personality disorder or some other weakness, has required or has been given special attention by the parent(s). Vulnerability may also have developed due to the time of birth when the parent(s)/family, particularly the mother was in stress and overidentified with the particular child as a means of satisfying her/his/their own needs (Atkins & Silber, 1993; Ratsam, 1992; Sohlberg & Strober, 1994).

The structural family systems model originated from the work completed by Minuchin and colleagues (1978). Based on clinical observations that the characteristics of the anorexic family were very similar to those noted in families where a vulnerable child suffered from an illness believed to be psychosomatic (ie., diabetes or asthma), Minuchin built upon the psychodynamic model proposed by Bruch (1978, 1988) and extended it to include the entire family system. Five common characteristics of family function were noted in the anorectic families. These are **enmeshment, overprotectiveness, rigidity, conflict avoidance and lack of conflict resolution (detouring conflict)** . Any of the characteristics occurring alone may not be indicative of inappropriate functioning. However, when occurring as a "cluster of transactional patterns" within a family system, normal functioning may be impaired (Minuchin et al., 1978, p. 30).

Although the specific characteristics within an anorectic family system may differ, the pathological interactional patterns which seem to exist between the subsystems are similar. **Enmeshment**, which is defined as "an extreme form of proximity and intensity in family interactions" (Minuchin et al. 1978, p. 30), may occur between individuals, dyads, extended family members or combinations of these. Alliances and coalitions may form, overinvolvement occurs, and communication patterns may become blocked. As a result of enmeshment, interpersonal differentiation and opportunities for the development of autonomy are poor. The differentiation of boundaries between subsystems of the anorectic family are "weak and easily crossed" (Minuchin et al., 1978, p. 30), but the boundaries between the family and external family systems are well defined and strong. In this way, the family maintains a separateness from the world.

Overprotectedness refers to the unusually high degree of concern demonstrated by the anorectic family members for each other. Throughout the anorexic's life, the parents have generally focused on her well-being, expressed in "hypervigilence of the child's movements and intense observation of her psychobiological needs" (Minuchin et al., 1978, p. 39). The child, in return, learns to display the same intense concern for her parents and is sensitive to their discomforts and needs. She is a parent watcher (Rakoff, 1983). Strong concern amongst all family members for each other's bodily concerns and needs has been noted as a characteristic of anorectic families.

Anorectic families appear to be well functioning, closely knit families. Arguments within the family are unusual which suggests an employment of **conflict-avoidance** mechanisms, leaving natural conflicts between family members unresolved. The family's rules define a means of **detouring conflict** in an attempt to maintain continuous harmony (Bruch, 1978; Minuchin et al. 1978; Levenkron, 1982).

Within the anorectic family, a set of rules which define the family's function and organization, and individual family member's roles, exist. The rules are rigid and all of the members struggle to operate within those rules. Anorectic families are heavily committed to maintaining the status quo, and reject individual member's needs for change. They attempt to protect the system from any influences that may ultimately alter the functioning of the family unit. Needs for autonomy and independence that naturally emerge during adolescence, are curtailed and the family attempts to maintain the well defined rules of interaction (Atkins & Silber, 1993; Minuchin et al., 1978).

Anorexia nervosa, therefore, is believed to occur as a result of the recursive cycles of these dysfunctional patterns of family interaction. Although the anorexic strives for autonomy and self-control, her role within the family is to maintain family harmony. Anorexia allows her to be an individual and to gain control over her own body, while maintaining the status quo of the family through her illness (Kog & Vandereycken, 1989).

Communication and Transaction

Mara Selvini-Palazzoli (1978), has based her theory of anorexia on the peculiar communication patterns she noted in the anorectic families she has counselled. From an analysis of the transactions she observed, she identified four common characteristic patterns of anorectic families, **blame-shifting, rejection of personal leadership, the formation of secret alliances and a three-way matrimony**. These characteristic patterns are employed to hide family disillusionment and protect the facade of family unity.

In anorectic families, Selvini-Palazzoli observed that family members feel guilty but cannot and must never be blamed when something goes wrong. **"Blame shifting"** seems to be similar to Minuchin's (1978), concept of overprotectionism. "Precisely because every family member "effaces" himself for the sake of the rest, no one member is really prepared to assume responsibility when something goes wrong" (Selvini-Palazzoli, 1978, p. 213). All decisions are for the good of someone else, and therefore decisions are never attributed to personal preferences. This results in the parents refusal to accept responsibility and no one in the family takes the leadership role. This concept is referred to by Selvini-Palazzoli (1978) as a "**rejection of personal leadership**".

The third characteristic Selvini-Palazzoli (1978) describes as common to anorectic families, is the existence of **secret alliances**. The family displays a facade of family unity and cohesiveness, and two-person alliances are tabooed. These alliances between family members occur secretly, as family members (primarily the parents) attempt to make up for their partner's shortcomings in their relationship with one of their children. This child is generally a vulnerable daughter, who during adolescence develops anorexia. The secret alliance between the daughter and her parents, has been labelled by Selvini-Palazzoli as a **three-way matrimony**, and the anorexic finds herself married to two persons. She attempts to distribute her attention as equitably as possible, but as her own needs for autonomy develop, she has no energy to build her own life and she begins to rebel. Her means of rebellion is a refusal to eat. Although this appears to be rebellion, the illness serves a dual purpose. The daughter gains control of her own life, yet maintains her position of mediator by providing the family a means through which they may hide their dysfunction.

Anorexia nervosa then, appears to occur as a means of maintaining homeostasis within the family. The daughter, who has been used throughout her childhood as a "scapegoat" by "detouring" family conflict, is able through her anorexia to continue to hide any indication of family dysfunction (Selvini-Palazzoli, 1978; Selvini-Palazzoli & Viaro, 1988). Members of these families seem to perceive conflict and separateness as unhealthy family traits. In their attempts to hide these traits within their family, they desperately attempt to demonstrate the opposite qualities (ie., overprotectionism, conflict-avoidance, unity). These overemphasized attempts at displaying "perfect" family traits, become a game (Selvini-Palazzoli & Viaro, 1988), where the players are the family members, the rules are rigid and extreme attempts to hide familial dysfunction, and the results are a lack of balance within the family system (Campbell, Draper & Crutchley, 1991; Selvini-Palazzoli & Viaro, 1988).

Although the communication and transaction theory is similar to structural family theory, Selvini-Palazzoli and the Milan group, place more emphasis on the triadic relationship between the parents and the "vulnerable child". The structural approach places more emphasis on the family's efforts as a whole to maintain homeostasis. Differences in therapeutic technique between structural family therapy and the Milan systemic approach to family therapy may also be noted (Campbell et al., 1991; Colapinto, 1991).

Family Psychodynamic Theory

The third family systems model, involves the integration of the traditional psychodynamic theory (pathological parent-child interaction model) with family systems theory. Stierlin and Weber (1989) discuss five dynamic interaction features noted regularly in anorectic families. The first characteristic, **loose individual boundaries**, is synonymous with Minuchin's (1978) concept of enmeshment. These loose individual boundaries often result in covert coalitions between family members. The second feature describes the family relationships with **emotional bonding an important mode of interaction**. The result of this bonding is a lack of ability for family members to separate and develop their own sense of autonomy. "**Delegation**" is the third concept, and refers to the family members' efforts to delegate for each other. These families display an excessive amount of care and concern for each other and an over-emphasized concern towards family loyalty. The anorexic is a loyal "delegate" of the family, willing to pay any price to live up to the expectations of her parents (Vandereycken & Kog, 1989, p. 20). The self-sacrificing delegation and loyalty bonds are transgenerational, with family members striving to live up to extended as well as nuclear family expectations. This concept of **transgenerational intrusion**, forms the fourth general family characteristic outlined by the Stierlin and Weber (1989). Finally, these authors describe a concept of the "**status of reciprocity**" which refers to the family's belief that giving is better than receiving. The daughter feels compelled to give more than she receives, and in so doing strives for attention by becoming the perfect child. As other siblings receive attention from the parents, she rebels and decides to live her own autonomous life. Yet in her rebellion for autonomy she continues to desire the attention and emotional bond of her youth, and chooses the safest way. Through her illness she guarantees further attention from the family. In addition, her illness maintains the unity of the family by providing a reason for the family to stay united (Weber & Stierlin, 1981; Stierlin & Weber, 1989).

Transgenerational Family Theory

White (1983) claims the three original family systems theories describe the anorectic families with "**too richly cross-joined**" systems (p. 256), and although he agrees with this description of the family, he argues that more emphasis is needed on the role of "**the family's system of rigid and implicit beliefs**" (p. 256). He views the family cycles of dysfunction as non-specific to the family under investigation, having developed over generations, being passed from one family of origin to the next families of procreation time and time again.

White's (1983) transgenerational view of anorexia, integrates societal expectations of the role prescriptions for women, with the family's rigid compliance to norms and conformity. These norms are transferred from one generation to the next, restricting family members to limited forms of interaction, both within and outside the family. Women in these families are socialized to be sensitive, devoted and self-sacrificing. For the vulnerable child, this pattern becomes over-emphasized. The daughter strives to fulfil these roles, yet becomes confused and guilt ridden when maturational and individuality needs make it difficult for her to conform.

According to White (1983), loyalty to other family members and to family tradition are over-emphasized. Relationships outside of the family are discouraged, and intrusion from extended family members (the grandparents) into the nuclear family life is common. The daughter feels compelled to live up to her role prescriptions and to the expectations of her parents and grandparents. Desires for authenticity are met with feelings of guilt and shame. These feelings on the part of the daughter, combined with parental dissatisfaction, extended family pressures and rigid expectations for all family members to conform, "encourage family members to become more tightly glued together in self-criticisms, blaming and other guilt inducing transactions" (p.257). According to transgenerational family systems theorists, these transactional patterns, coupled with strong family traditions involving food, may result in a susceptibility to the development of anorexia nervosa within the family environment.

Although transgenerational family systems theory has received little attention in the anorexia literature (Vandereycken et al., 1989), it has become more recognised in general family studies literature as a powerful explanatory model for a variety of negative health outcomes in children (Sroufe, 1991). Based on the work completed by Harvey and collegues(Harvey, Curry & Bray, 1991; Harvey & Bray, 1991), Gable and collegues (1992), and Williamson (1982a, 1982b), the patterns demonstrated by anorectic families resemble patterns which, over generations, influence the development of ineffective parenting, "scapegoating" as a means of detouring conflict, attempts by all family members to maintain facades of perfectionism, and negative health outcomes in one of the children. These patterns "fit" with those described by the family systems theorist. Therefore, it seems that an etiological model of anorexia without consideration of the influence of intergenerational family patterns of interaction may be incomplete.

Summary of the Family Systems Theories

All four of the family systems theories describe similar concepts and family patterns. The key to the systems framework is its reciprocal nature. The behaviour of one family member, or a specific pattern of interaction between dyads, effects all other members of the family. The reactions of other family members intertwine to form transactive patterns that maintain the family in a homeostatic form. Change is feared, and pathological patterns of interaction develop to maintain the status quo and family traditions. The family's boundaries to the outside world are rigid, but internal boundaries are loose. As the pressures from the external world heighten due to progress of the family along the family life cycle and the maturational needs of its members, the family develops patterns to strengthen the external boundaries, and maintain its internal homeostasis. However, as the family progresses through the family life cycle, these patterns begin to weaken, and eventually breakdown. At this point, the family may alter its patterns, submitting to the need for change. In many cases, new, even more dysfunctional patterns of interaction may be developed to cope with, or hide from the external pressures.

Shame, guilt and self-sacrificing ideology, seem to be recurring themes, both through the family systems and pathological parent-child interaction literature (Alexander, 1986; Bemporad & Ratey, 1985; Bruch, 1988; Fischer, 1989; Lewis & MacGuire, 1985; Minuchin et al., 1978; Restifo, 1988; Selvini-Palazzoli & Viaro, 1988; Scheff, 1989). Kog and Vandereycken (1989) summarize these themes by stating the "anorexic patient appears more as a martyr than an ill person. Through her 'suffering', she carries out the family mission of maintaining threatened homeostasis" (p. 17). Through her illness, and her own experiences of guilt and shame, the family is able to maintain patterns of complementarity, family loyalty and a facade of family perfection. The daughter's illness is a means of guarding the family from identifying or dealing with these inappropriate patterns (Kog & Vandereycken, 1989; Stierlin & Weber, 1989).

Clinical and Empirical Investigations of the Family Systems Theories

The family systems theories presented thus far have been based primarily on clinical observations rather than on empirical research (Kog, Pierloot & Vandereycken, 1983). Kog and Vandereycken (1989), claim theorists attempting to find a "typical anorectic family profile" (p. 22), risk mistaking a clinically observed correlational pattern for causality. The theoretical constructs described by these clinicians are stereotypical and difficult to measure. Kog and Vandereycken (1989) argue that the theories require methodologically sound empirical testing in order to be verified.

Most of the empirical work found in recent literature on anorexia nervosa are attempts to either support or reject the clinically derived theories. The constructs described in the family systems models have been, in many cases re-stated into operationally measurable terms. For example, Kog, Vandereycken and Vertommen (1985) redefined Minuchin's (1978) structural family systems concepts of enmeshment, rigidity and conflict avoidance/lack of conflict resolution into the dimensions of Olson's Circumplex Model of Family

Functioning (Olson, Sprenkel & Russell, 1979). These measurable constructs include cohesion, adaptability and conflict management. The structural family systems concept of overprotectedness has been redefined by Steiger (1989), Calam (1989) and their colleagues as a dimension of parental bonding. This concept has been used to explore both the structural family systems theory and the psychodynamic theory, described in the previous section.

A number of studies attempting to assess the entire family environment and family functioning have also been employed through the use of family measurement instruments such as the Family Environment Scale (Moos & Moos, 1981), the McMaster Family Assessment Device (Epstein, Baldwin & Bishop, 1978), the Family Assessment Measure (Skinner, Steinhauser & Santa-Barbara, 1983), the Structural Family Interaction Scale (Perosa, Hansen & Perosa, 1891), the Leveun Family Questionnaire (Kog et al., 1985) and the Standardized Interview for Anorexia Nervosa (Engel & Hohne, 1989). The results from these studies are equivocal.

Most of the reports using the Family Environment Scale have concluded that the anorectic family environment is less cohesive, more conflictual and family members demonstrate less expressiveness (Leon, Lucas, Colligan, Ferdinande & Kamp, 1985; Sheppy et al., 1988; Shisslak et al., 1990; Strauss & Ryan, 1987). Stern and colleagues (1989) and Strober (1981) found restricting anorexics perceived more cohesiveness and more organization, but no significant differences were noted between the anorexics and comparisons on conflict or expressiveness. Both of these studies divided the eating disorder group into their appropriate categories and found significant differences between the restrictor and bulimic types of anorexics. The anorexic bulimics in both studies were older, and perceived their families as less cohesive and more conflictual. This suggests that results of studies which have combined the eating disorder groups may not be accurate for restricting anorexics. In addition, some of these studies using the Family Environment Scale have combined the scores of the mother, daughter and father. Other studies have reported the daughter's perceptions only. The combining of individual scores may not provide an accurate assessment of the true family environment. Combining scores to achieve a family score confuses levels of variables by using the individual as the unit of measurement, combined scores of some family members as the unit of analysis, and the family environment as the object of study. This inconsistency may reduce the validity of the results (Larsen & Olson, 1990).

Assessing the structural family systems constructs has been attempted by Kog and her colleagues (Kog et al., 1987; Kog & Vandereycken, 1989) using the Leveun Family Questionnaire. The results from these studies, which did not combine scores, but assessed the scores of the family members separately, indicated that members of the anorectic families perceived their families as more cohesive and as demonstrating less disagreement and disorganization than comparison families. The comparison families in both of these studies were matched for age and socio-economic status, with no presenting psychiatric or eating disorders in any of the members. Interestingly, anorexic bulimics in both studies were older and their families reported less cohesion, more conflict and more disorganization than restrictor anorexics.

The Family Assessment Measure and Family Assessment Device are both measurement tools based on the McMaster Model of Family Functioning. A study completed using the Family Assessment Measure indicated that mothers and daughters of anorectic families scored lower on the family task, role performance and communication scales than did comparison families. Fathers of anorexics perceived no significant differences from comparisons on any of the scales (Garfinkel et al., 1983). Three studies using the Family Assessment Device obtained consistent results, indicating that daughters assessed their families as less healthy on all of the scales, and mothers perceived less affective involvement and affective responsiveness than comparison mothers (Steiger, Liquornik, Chapman & Hussain, 1991; Waller, Calam & Slade, 1989, Waller, Slade & Calam, 1990). As with the fathers' scores on the Family Assessment Measure, the fathers' scores in all of these studies showed no significant differences between the fathers of anorexics and fathers in comparison families. The results of these studies seem to support the proposition that the father is somewhat removed from the family system, or tends to view his family in a socially desirable way, perceiving functioning in his family as normal.

Other studies assessing family variables have also produced equivocal results. Most of these have reported the anorectic family to be less cohesive, more conflictual, and demonstrating less adaptability than comparison families (Engel & Hohne, 1989; Harding & Lachenmeyer, 1986; Kagan & Squires, 1985; Waller et al., 1990). All of these studies, however, have combined eating disordered groups, and have either combined individual family members scores or reported on the anorexic's perceptions alone. It is important to note that studies separating the eating disorder categories seem to indicate that the families of anorexics are generally more cohesive and less conflictual that bulimic anorectic or bulimic families (Kog et al., 1987; Kog & Vandereycken, 1989; Shisslak et al., 1990). These are methodological problems which are common in anorexia research, but may distort the results and thus reduce the validity of the conclusions (Gowers et al., 1989; Kog et al., 1983; Shaw & Garfinkel, 1990).

Some of the richest data on family interaction, individual perceptions and intrapsychic affects has been compiled using Benjamin's Structural Analysis of Social Behaviour (Benjamin, 1974; Humphrey, 1986, 1989; Strober & Humphrey, 1987; Grigg et al., 1989; Sheppy et al., 1988). These studies have demonstrated that the relationship of the daughter to her mother, and the daughter to her father are quite different. The relationship between daughter and mother seems to indicate that the mother attempts to control her daughter through nurturing, comforting and controlling behaviours, yet also displays ignoring and neglecting responses. The daughter approaches and responds to her mother with submissive and appeasing, rejecting and ignoring behaviours. The father daughter relationship is characterised by psuedoaffection and psuedohelp (described as complex mixed messages) combined with controlling and negation behaviours. The daughter responds by submitting and appeasing, and walling off and avoiding (Humphrey, 1986, 1989; Strober & Humphrey, 1987). It is interesting to note that bulimic sub-types tend to display greater amounts of conflictual approaching and responding behaviours than restrictor anorexics (Humphrey et al., 1987).

As mentioned in the section on pathological parent-child interactions, the Structural Analysis of Social Behaviour was also used by Grigg and associates (1989) to develop family typologies. The typologies describe the predominantly anorectic families as extending from a "perfect family" typology, displaying virtually no conflict, to "hostile conflictual families" displaying significant amounts of overtly conflictual behaviours. It is note worthy that all of the anorexics in the most openly conflictual family typology were classified as anorexic/bulimics. Four of the five predominately anorectic family typologies described the father as distant or removed from the family system. The results from this study seem to suggest that dyadic relationships within the family may vary, and the environment resulting from the combination of these relationships may also vary. Assessments of single dyadic relationships within the family may therefore be inappropriate.

A Comparison of the Family Systems and Psychodynamic Theories

The family systems theories describe family variables that may be contributing factors in the development and perpetuation of anorexia nervosa. In contrast, psychodynamic theory assesses the interpersonal relationships between the anorexic and one parent and the resultant intrapersonal conflicts for the anorexic. The family systems theories, identify patterns of interaction within the entire family system. The constructs are family constructs, not dyadic relational constructs. Psychodynamic theory proposes a relationship variable as a key contributing factor rather than family variables as proposed by the family systems theories.

Although the psychodynamic theories have been criticized for being too limited in their scope, they may contribute valuable information about relationships within the family system. Specifically, the relationships between the anorexic and her mother and father as either enmeshed or distant, are viewed as relationship variables, not family variables. Although the family systems frameworks describe enmeshment as a family variable, examples of both enmeshed and distant relationships within the family can be found in case studies and descriptions of family relationships provided by family systems theorists (Minuchin et al., 1978; Selvini-Palazzoli & Viaro, 1988). It seems therefore, that the family variable of cohesion, may require further investigation as a relationship dimension within the family rather than as a family variable.

The dimension of conflict in an anorectic family has also been described very differently in a number of studies. It seems that the sub-classifications of anorexia seem to influence the degree of conflict noted within the family system. It also seems that the sub-types of anorexics that tend to indicate more conflict in the family, are older. From a developmental perspective the family system may change, and experience increasing conflict as the family attempts to find new ways to resolve their problems. In the past, conflict has been avoided or hidden through scapegoating or detouring, using the weakness of the child as the detouring mechanism. With rebellion from the adolescent daughter, these patterns of detouring conflict no longer work and conflict becomes overt. From this perspective, it would seem that a major downfall in the previous models is the lack of inclusion of a time dimension. Anorexia seems to be a dynamic disorder with changes in both the anorexic and the family occurring as the disorder progresses from one stage (or crisis) to the next.

Summary of the Family Systems and Psychodynamic Theories

While the family systems and psychodynamic frameworks lends considerable understanding to how anorexia nervosa may occur within a particular family, they, like the other theories presented, are limited in their etiological power. Understanding of what has made this child particularly vulnerable to the "scapegoat" position, and understanding what compels the individual towards an obsession with food and weight are not explained by either the family systems or psychodynamic theories. The limitations of these two models may be better explained by the linear causality theories including genetic transmission and socio-cultural influences. Understanding how the obsessions become so severe that starvation and even death may occur, may be addressed by the physiological models.

Although the picture becomes a little clearer with the introduction of each theory, there remains a question of what factors may influence this individual to become vulnerable. While the theory of genetic transmission may contribute to a partial explanation for the susceptibility, research from an individual psychopathological perspective may provide further insight into this question.

Individual Psychopathology:

Personality Correlates with Anorexia Nervosa

The purpose of the following section of the thesis is to present a summary of the existing literature on the personality of an anorexic. The section will first, identify personality traits presumed to be characteristic of the anorexic during the pre-anorexic, acute and post-anorexic stages. Second, the possible links between anorexia and personality disorders as presented in the literature will be outlined. Finally, an overview of anorexia nervosa from a self-psychology perspective will be presented. It is proposed that an examination and integration of the literature from the trait and self-psychology perspectives may contribute to greater understanding of the factors influencing the development and maintenance of anorexia nervosa.

Premorbid Personality Traits

A number of authors have discussed the pre-morbid personality traits of an anorexic (Atkins & Silber, 1993; Butler, 1988; Bruch, 1973, 1988; Crisp, 1980; Leon et al., 1993; Ratsam, 1992; Selvini-Palazzoli, 1978; Stierlin & Weber, 1989; Sohlberg & Strober, 1994; Strober et al., 1985; White, 1992). The pre-anorexic is presumed to be compliant, introverted, conscientious and well behaved. She has been described as highly intelligent with superior scholastic achievement. In a recent review of the literature of personality in anorexia, Sohlberg and Strober (1994) discuss two predominant pre-morbid personality traits including perfectionism and obsessiveness.

Difficulties in finding empirical support for these descriptions of the pre-anorexic are obvious. Because there is no way of knowing who will become anorexic, it is impossible to identify and test pre-anorexics. The identification of pre-morbid personality traits must therefore rely on retrospective data. This data may be collected either by application of self-report measures of past experiences and perceptions, or through interpretations of clinical observations and assessments. Although most descriptions of the pre-morbid characteristics have relied on clinical and anecdotal accounts of the anorexic's childhood experience, three recent empirical studies (Atkins & Silber, 1993; Leon et al., 1993; Ratsam, 1992) employing a multi-method approach reported findings consistent with those suggested by clinicians (Sohlberg & Strober, 1994).

Personality During the Acute Stage of Anorexia Nervosa

A number of studies on anorexia have appeared in scholarly journals assessing the personality of anorectics during the acute stage of the illness. Two main avenues have been approached to assess the impact of personality on the course of the disorder. The first method involves assessing the effects of personality on prognosis. The second method involves assessing the similarities and differences between subtypes of anorexia (Swift & Wonderlich, 1988).

Outcome studies linking personality traits with prognosis, seem to indicate that a dramatizing, affection-seeking, extroverted and impulsive style in restrictor anorexics is a predictor of positive outcome (Edwin, Andersen & Rosell, 1988; Engel & Meier, 1988). Poorer prognosis seems to be evidenced in patients demonstrating a defensive-denying style, obsessiveness, introversion, social withdrawal, self-control, inhibition of emotionality, conscientiousness and lack of interoceptive awareness (Casper, Hedeker & McClough, 1992; Edwin et al., 1988; Engel, 1989; Engel & Meier, 1988; Leon et al., 1985; Russell, 1992). Steinhausen & Glanville (1983) found anorexics displaying mistrusting-depressive psychic structures evidenced a less optimistic prognosis. In a recent study by Wonderlich, Fullerton, Swift and Klien (1994), characteristics associated with borderline personality disorder, including affective and interpersonal instability, impulsivity, self-destructiveness and abandonment sensitivity, had significant negative relevance to long-term outcome.

In a study by Lunn (1990), a variety of personality features were displayed by anorexics. Lunn (1990) rejected the claim that anorexics can be lumped into categories based on personality constructs and argued that the course of the disorder and personality development at various stages was different for each individual. In the discussion, Lunn (1990) and others (Sohlberg & Strober, 1994) emphasized the need for individual assessment and treatment based on the maturity of the individual's personality and manifestation of symptoms of the disorder.

A number of studies have appeared in the past five years to compare the differences in personality between the various forms of the eating disorders. Reviewers of the literature suggest there may be a wide range of heterogeneity within this population (Shapiro, 1988; Striegel-Moore, Silberstein & Rocin, 1986; Garfinkel & Garner, 1988; Strober & Humphrey, 1987; Sohlberg & Strober, 1994; Vandereycken, Kog & Vanderlinden, 1989). This hypothesis, however, remains controversial. A number of authors using measures to assess the relationship between eating disorder subtypes and personality traits suggest that there is little difference between restricting anorexics and those displaying a subclinical form of anorexia (Bunnell, Shenker, Nussbaum, Jacobson & Cooper, 1990; Piran, Lerner & Garfinkel, 1988; Wonderlich et al., 1990). Some studies indicate, however, that significant differences between the anorexic and bulimic subtypes of the disorder can be noted. Restrictor anorexics tend to display greater degrees of constraint, tension, acting out potential and obsessive-compulsive tendencies, while anorexics of the bulimic type tend to display a significantly greater degree of disturbance, extroversion and aggressiveness (Engel & Meier, 1988; Herzog, Keller, Sacks, Yeh & Lavori, 1992; Leon et al., 1985; Scott & Baroffio, 1986; Strober et al., 1985; Strober & Humphrey, 1987). The bulimics (bulimia nervosa and subclinical forms), display greater degrees of impulsivity, social withdrawal, and lower levels of self-confidence and self-acceptance (Bunnell et al., 1990; Herzog, Rathner et al., 1992; Lenihan & Kirk, 1990; Wonderlich et al., 1990). It is important to note that all of the eat0ing disordered groups in these studies displayed greater psychopathology than normal comparison groups.

One of the major difficulties in an assessment of the relationship between personality and eating disorders is the fact that little is known about the progression of the disorder (Herzog, Rathner et al., 1992; Rathner, 1992). It is estimated that over half of the bulimic patients and almost all anorexic bulimic patients have been restrictor anorexics in the past (Garner & Garfinkel, 1988; Garner et al., 1993; Takei et al., 1989). No studies to date have compared the personality traits of those who progress from anorexia to anorexia bulimia or purging anorexics, with those that remain restrictor anorexics. A longitudinal study of personality beginning with a newly diagnosed sample of restricting anorexics may provide valuable insight into the effects of personality on the progression of the disorder (Herzog, Rathner, et al., 1992).

Because the majority of personality assessments are completed during the acute stage of the disorder, it is difficult to determine whether the personality existed prior to the onset of anorexia, or whether the personality traits are a result of the disorder. It has been suggested by some researchers that progression through the disorder alters the personality of the individual (Ekert, Halmi, Marchi & Cohen, 1987).

A few studies have recently been conducted attempting to determine which personality characteristics are consistent in the anorexic throughout the course of the disorder, and which characteristics tend to develop as the illness progresses (Casper, 1990; Halmi et al., 1991; Ekert et al., 1987; Kennedy, et el., 1990; Lunn, 1990; Smith & Stiener, 1992; Sohlberg, 1990). Each of these studies indicated that some of the personality traits changed from initial assessment to assessment following treatment. It was proposed by these authors that the affects of depression had a significant influence on personality. With a decrease in the depressive state, decreases were also noted in anxiety, emotionality, social withdrawal and self-degradation (Gartner et al., 1989; Kennedy et al., 1990; Strober et al., 1985). Where the depressive state remained constant, prognosis was less favourable and a chronic course of the eating disorder was suggested (Herpertz-Dahlmann & Remschmidt, 1993; Smith & Steiner, 1992).

Casper (1990) concluded that consistent personality traits in the restrictor anorexic include high degrees of restraint and control, and low levels of tolerance and flexibility. Similar conclusions were noted in a later study by Casper and associates (1992). A tendency towards compulsiveness seemed to prevail as an enduring personality trait over the course of the disorder (Kennedy et al., 1990; Gartner et al., 1989; Ratsam, 1992; Roth & Armstrong, 1990; Slade, 1982; Sohlberg & Strober, 1994). The apparent association between obsessive-compulsiveness has spurred considerable recent empirical investigation. Studies have assessed various possible associations of obsessive-compulsive traits with anorexia.

Association between Anorexia Nervosa and Obsessive-Compulsive Disorder

Assessments to determine the extent of co-morbidity of obsessive-compulsive disorder[6] and anorexia, suggest anorexic patients often have concurrent obsessive-compulsive disorder symptoms, sometimes severe enough to qualify for clinical diagnosis of both disorders. However, many of these same patients also display symptoms of coexisting depression, anxiety and mood disorders. Few seem to have displayed obsessive-compulsive disorder symptoms pre-morbidity, and obsessive-compulsive symptoms severe enough to qualify for clinical diagnosis seem to subside as the patient recovers (Hsu, Kaye & Weltain, 1993; Sohlberg & Strober, 1994). It is important to note that the studies reviewed by Hsu and colleagues (1993) and Sohlberg and Strober (1994), investigated for the prevalence of obsessive-compulsive disorder in anorexic patients and not the prevalence of anorexia nervosa in obsessive-compulsive disorder patients.

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[6] Obsessive-compulsive disorder (OCD) is categorized as an anxiety disorder and is characterized by a) repetitive, intrusive thought(S) (obsessions) which cause anxiety and b) repetitive, ritualistic behavior(S) or mental act(S) (compulsion) aimed to reduce anxiety (DSM III-R, 1987).

The association between obsessive-compulsive disorder and anorexia has also been assessed considering anorexia nervosa as a variant or symptom of obsessive-compulsive disorder. In a few studies, obsessive-compulsive disorder patients were assessed for co-morbid eating disorders. Interestingly, a greater association seemed evident in these studies than those assessing the prevalence of obsessive-compulsive disorder in eating disorders (Fahy, Oscar & Marks, 1993; Hsu et al., 1993; Rubenstein, Pigott, L'Heureux, Hill & Murphy, 1992). Lifetime occurrence of anorexia nervosa in patients diagnosed with obsessive-compulsive disorder was significant. The results suggest anorexia nervosa, in some cases, may be a variant of obsessive-compulsive disorder. Whether the obsessive-compulsive disorder or anorexia is the primary disorder, however, remains ambiguous (Hsu et al., 1993; Rubenstein et al., 1992; Sohlberg & Strober, 1994).

Summary of the Personality Trait Literature

The results of the empirical studies investigating the association between personality traits and anorexia nervosa, seem consistent with clinical and anecdotal literature. Claims by clinicians that the personality of the anorexic becomes more agitated, introverted, aggressive and self-destructive with the progression of the disorder (Bruch, 1985, 1988; Minuchin et al., 1978; Selvini-Palazzoli, 1978; Stierlin & Weber, 1989) seem to be supported. Further longitudinal research to identify changes in personality over the course of the disorder may be useful in better understanding the anorexic's behaviors and personality.

The Relationship between Anorexia Nervosa and Personality Disorders

Until recently, little empirical research had been conducted to determine the relationship between anorexia nervosa and personality disorders. Personality disorders are

Until recently, little empirical research had been conducted to determine the relationship between anorexia nervosa and personality disorders. Personality disorders are defined in the DSM III-R (APA, 1987)as "...inflexible and maladaptive patterns of sufficient severity to cause either significant impairment in adaptive functioning or subjective distress" (p. 366)[7]. Twelve specific personality disorders, each based on designated multiple diagnostic criteria, and a nonspecific, mixed or atypical category for cases not meeting the specific categories are outlined in the DSM III-R.

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[7] A distinction between obsessive-compulsive disorder (OCD) and obsessive-compulsive personality disorder (OCPD)is necessary. Obsessive-compulsive personality disorder is defined as a pervasive pattern of preoccupation with perfectionism, mental and interpersonal control, and orderliness at the expense of flexibility, openness, and efficiency. Contrary to obsessive compulsive disorder, which may involve extreme thoughts and behaviors surrounding one (or a few) activity(ies), obsessive-compulsive personality disorder involves excessive, extreme thoughts and actions in all day to day activities. Data from studies assessing the relationship between anorexia nervosa and OCD, and those investigating the relationship between anorexia nervosa and personality disorders are therefore assessing two distinct phenomenon.

The specific personality disorders are further grouped into three clusters based on predominant personality features. The first cluster (Cluster A) is labelled the "odd or eccentric" group and includes the Paranoid, Schizoid and Schizotypal personality disorders. The second group (Cluster B) is hallmarked by "dramatic, emotional, or erratic behaviors" and includes the Histrionic, Narcissistic, Antisocial and Borderline personality disorders. The third group (Cluster C), including the Avoidant, Dependent, Compulsive and Passive Aggressive personality disorders are described as appearing "anxious and fearful" (Garfinkel & Garner, 1988, p. 124). The final category identified by the DSM III-R (APA, 1987), is labelled "other" and includes the self-defeating personality disorder.

Recent outcome studies, have identified correlations between the presence of personality pathology in anorexia and a poorer prognosis (Herzog, Rathner et al., 1992b; Skodol et al., 1993; Stangl & Zimmerman, 1984; Torem, 1990; Wonderlich et al., 1994). Specifically, patients with an eating disorder and coexisting personality disorder generally displayed more severe symptoms and were significantly more likely to relapse after termination of therapy than were those patients with an eating disorder alone (Green & Curtis, 1988; Herzog, Ratner et al., 1992; Skodol et al., 1993; Wonderlich et al., 1994). Identifying coexisting personality disorders with anorexia nervosa may help to understand the eccentric behaviors displayed during the acute stage of the disorder and may have important implications for treatment.

A number of different psychometric instruments have been administered either through self-report or interview format to eating disordered individuals to determine co-morbidity of personality disorders. Although the wide variance in results may be attributed to differences in the instruments, all of the studies report a the prevalence of personality disorders in eating disordered patients is significant when compared to normal controls, or comparison groups with other psychiatric and/or physiologically based illnesses (Hsu et al., 1993; Sohlberg & Strober, 1994).

Skodol and associates (1993) reviewed 13 studies investigating the rate of one or more personality disorders among eating disorders indicating a co-morbid range of 27% - 97%. Although the range is extremely wide, the majority of studies cluster between 75% - 95% range (Gartner et al., 1989; Herzog, Rathner et al., 1992; Kennedy, McVey & Katz, 1990; Piran et al., 1988; Ratsam, 1992; Skodol et al., 1993). Differences between the subclassifications of the disorders, were found in all but one study (Gartner et al., 1989). The most common personality disorders noted in restricting anorexics were avoidant and obsessive-compulsive personality disorder, and the most common diagnosis with bulimic anorexics was histrionic and borderline personality disorder (Herzog, Rathner, et al., 1992; Kennedy et al., 1990; Piran et al., 1988; Skodol et al., 1993).

Clinical records and a few retrospective studies of the pre-morbid personality of anorexics, indicate that many anorexics displayed symptoms of obsessive-compulsive personality disorder during childhood (Atkins & Silber, 1993; Ratsam, 1992; Sohlberg & Strober, 1994). Results from studies focusing on the acute stage of the illness are equivocal. It seems the degree to which anorexic patients display obsessive-compulsive personality disorder is largely dependent on the psychometric instrument utilized. In a review of the literature, Hsu, Kaye and Weltzin (1994) conclude that although the data indicates an increased prevalence of pre- and co-morbid obsessive-compulsive personality disorder in anorexics in comparison to bulimics or normal controls, the association "is not striking" (p. 309).

In summary, restricting anorexics seem to display more obsessive-compulsive personality disorder symptoms and anorexic bulimics display more borderline personality characteristics. Anorexic bulimics are also more likely to vary across the classification scale, and may also be diagnosed with a histrionic or schizotypal personality disorder (Herzog, Rathner, et al., 1994; Kennedy et al., 1989; Wonderlich et al., 1990; Skodol et al., 1993).

In studies using the Minnesota Multiphasic Personality Inventory (MMPI), within group comparisons demonstrated restrictor anorexics display a withdrawn, depressed or defensive-denying style, and had a poorer prognosis upon termination of treatment. Bulimic anorexics emerge as dramatic, impulsive, distressed and overwhelmed (Casper, 1990; Casper et al., 1992; Edwin et al., 1988). In a study by Scott and Bariffio (1986), both sub-types of anorexics revealed greater identity confusion and reality distortion than normal comparison groups. The anorectic subjects also tended to display fear of social interaction and greater anxiety due to mistrust.

It is interesting to note that in a number of studies relating personality disorders with bulimia nervosa, a high rate of borderline personality disorder has been diagnosed (Gwirtsman, Roy-Byne & Yager, 1983; Cooper, Morrison & Bigman, 1988). Since the majority of chronic anorexics tend to develop bulimic tendencies (Garner et al., 1993; Ratnasuriya et al., 1991; Takai et al, 1990) this may explain the higher rates of borderline personality disorders found in bulimic forms of anorexia. In addition, a greater degree of depressive symptoms seem to be evident in both bulimic and chronic anorexic patients (Bunnell et al., 1990; Casper, 1990; Edwin et al., 1988; Scott & Baroffio, 1986; Smith & Steiner, 1992; Wonderlich et al., 1990). Because the diagnosis of personality disorders in eating disorder patients seem to decrease with a decrease in depressive symptoms (Gartner et al., 1989), personality disorders are more likely to be complications of the eating disorder than characterlogical dispositions (Bunnell et al., 1990).

Of the personality disorders identified in anorexic individuals, compulsiveness seems to be the most common diagnosis and the most widely agreed upon disorder by most researchers (Gartner, et al., 1989; Kennedy, et al., 1989; Piran, et al., 1988; Sohlberg & Strober, 1994; Wonderlich, et al., 1990). It has also been identified by Casper (1990) as the personality disorder which endures following recovery from anorexia. Sohlberg and Strober (1994) develop an "organismic-developmental paradigm for disorders of the self in anorexia nervosa" (p. 10), which considers the interacting effects of environmental conditions with the individual personality characteristics of an anorexic. In their discussion, these authors highlight a possible explanation for the emergence of anorexia nervosa, involving the complex interactions between the anorexic's personality (obsessive-compulsive, self-controlled, reward seeking, defensive, conscientious and inhibiting of emotionality), the family environment and society. It seems understanding of the individual personality of the (pre)anorexic therefore, is essential in any etiological model of anorexia nervosa.

The Inner Self of the Anorexic

A very interesting concept that has been indicated in a number of case studies, and has been mentioned briefly in clinical data, is the evidence that the anorexic is dealing with intense inner conflict between "two-selves" (Bruch, 1973, 1978, 1988; Fischer, 1989; Ohler-Madsen, 1990a, 1992a, 1992b; Restifo, 1988; Scheff, 1989; Spignesi, 1986). The conflict has been described by anorexics as "the bad and good side of my brain" (Jill, Ohler-Madsen, 1992b), the "ferocious taskmaster" (Heater, 1983), "my ugly rat in a cage", (Kerry, Ohler-Madsen, 1992b), "demon like creature" (Johnston, 1993), "IT, the big ugly head inside of me" (MaCleod, 1981). Spignesi (1986) has described the inner conflict between a "hapless victim", (or the compliant, sweet individual in a childlike stance), and an "inner tyrant", or a "morbid urge that rules her" (p. 31). From the outside, this "inner tyrant" appears to be excessive willpower, but on the inside the tyrant is a "dictator who dominates me" or "the little man inside who objects when I eat" (Bruch, 1978, p. 55). Little mention has been made of a split self in any of the empirical data. However, the impact of this "inner conflict" on the anorexic cannot be overlooked (James, 1990; Ohler-Madsen, 1992a, 1992b). The "other self" rules the anorexic and may be a key component in the perpetuation of the disorder (Spignesi, 1986; Heater, 1983; MaCleod, 1981; Johnston, 1993).

How a "split-self" emerges, has not been addressed to date in the anorexia nervosa literature. An exploration of the personality structures from a self-psychology/ structural-developmental framework may provide insight into the concept and aid in understanding how the individual personality of the (pre) anorexic may interact with the environment to produce a situation ripe for the development of a psychopathological disorder, in this case anorexia nervosa.

Anorexia Nervosa from a Self-Psychology Framework

Evidence that the anorexic is dealing with intense inner conflict between "two-selves" has been described by Fischer (1989) as a "push-pull dance", a scenario of:

> "I feel so helpless, so alone and I need help - but if you do I will be enraged and hurt - your help will make me feel more helpless and overwhelmed - I do not need anyone's help - you must help me" (p. 45).

The self-psychology or structural-developmental theoretical framework may provide an explanation for the "split self" (Bruch, 1978, p. 55). Self-psychologists argue that an individual's development of an integrated "whole" self, is dependent on the relations with significant others (or self-objects) throughout childhood. These self-objects provide feedback from which a child develops a concept of self and moves towards higher modes of personality development. "A firm self, characterized by a relatively stable sense of well-being and self-esteem, results from optimal interactions between the child and his or her self-objects" (Brighton-Cleghorn, 1987, p. 190). Self-objects become a role-model (idealization) for the child, provide opportunity for validation (mirroring), and provide a sense of oneness or identity (alter-ego/twinship). From a structural-developmental framework, this development of the integrated self occurs as the individual moves towards greater degrees of maturity via an appropriate relationship with another, a self-object[8].

Brighton-Cleghorn (1987) indicates that a sense of self and family paradigm are analogous. The self feeds into the family paradigm and the family paradigm is the basis for the sense of self. When family disharmony occurs, the paradigm collapses under stress, and one family member may be held to, and accept full responsibility for the family stress. That individual's sense of self does not become integrated, or regresses to a less mature state. The individual's self is not cohesive. Brighton-Cleghorn (1987) describes this phenomenon as:

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[8] For a thorough discussion of the structural-developmental framework of personality development see Swift & Wonderlich (1988).

> "a preoccupation with a self is in a single body part, and single mental and physical functions begin to replace the total experience of the body/mind self, and biological rhythms connected to cycles of eating, sleeping, and so on, may be experienced as out of kilter. A body fragment dominates." (p. 189)

If we view the anorexic situation from a structural-developmental perspective of self, the emergence of a fragmented self seems plausible. First, from the literature on anorexia from a family perspective, the anorexic did not receive the adequate feedback from her self-objects (her parents), and did not receive the idealization, mirroring or alter-ego/twinship required for development of a cohesive self (Atkins & Silber, 1993; Bruch, 1973, 1978; Beattie, 1988; Minuchin et al., 1978; Ohler-Madsen, 1992b; Sohlberg & Strober, 1994; Stierlin & Weber, 1989; Selvini-Palazolli, 1978). The child remained in an immature state of personality development.

Secondly, the family paradigm itself was not balanced. An inappropriate enmeshed relationship is believed to have occurred at one level, usually the mother-daughter relationship (Bruch, 1978, 1988; Beattie, 1988; Minuchin et al., 1978; Stierlin & Weber, 1989; Selvini-Palazolli, 1978), and a disengaged relationship at the other, normally the father-daughter relationship (Grigg et al., 1989; Humphrey, 1986, 1989; Strober & Humphrey, 1987; Stierlin & Weber, 1989; Scheff, 1989; Selvini-Palazolli & Viaro, 1988). The child became the "self-object for the family unit" and her behaviours and symptoms became a "substitute in the family unit for these missing human interactions, the self-object requirements" (Brighton-Cleghorn, 1987, p. 192). Thus, not only is the child fixated in an immature personality state, but the family is stagnated at an inappropriate level of interaction. This feeds into and perpetuates the child's immature defense mechanisms. The child strives for autonomy and control in an attempt to integrate the chaotic self (Swift & Wonderlich, 1988).

The self-psychology/structural-developmental theoretical framework may therefore provide an explanation for the presentation of the "two selves" within the anorexic. It may provide insight into the inner conflict and the confusion experienced by the anorexic and provide an understanding of the changing interactions between the anorexic and her family.

Summary of the Self-Psychology Literature

In summary, the self-psychology or structural-developmental theoretical framework of personality development may be a valuable tool in gaining an understanding of cognitions and behaviors of the anorexic. Integrating this theory with components of the other theories which are supported by empirical and clinical evidence, may provide a holistic view of anorexia nervosa. In considering the individual personality of the anorexic and the interacting relationship of this individual with her immediate and extended family, in a community and societal system that place emphasis on achievement and materialism, the stage for stress and psychological illness may have been set.

From a perspective of self-psychology, one individual in the family system may suffer from tensions and stress within the family. Given an adolescent child who may be "vulnerable" due to personality, genetics, present position in the family or (more likely) a combination of these factors, tensions of the family and society may be borne out in this child. The child then remains in, or regresses to, an immature state of personality development. In this state, the self is fragmented. Desires to achieve a cohesive self may drive this young female into extreme measures of attempting to gain autonomy. Because of unhealthy relationships within the family, this cannot be achieved. An inner battle ensues between the fragments of the self - one who desires to move to a more mature level of autonomous functioning, and one who wishes to maintain family harmony by remaining in an immature state. Integrated into a societal system where autonomy and independence are symbolized by thinness, fitness, and academic/business achievement, the individual's drive for autonomy may be channelled towards attaining this ideal.

Anorexia nervosa allows the individual to fulfil the needs of both selves. As she strives for society's image of an autonomous woman, she may at the same time, remain dependent, in an immature state of functioning. In her attempts to fulfil the needs of both selves, an inner battle rages, and the psychopathology becomes entrenched.

The questions so often asked, are - why anorexia nervosa? Why this individual? Although we cannot answer these questions with certainty, the integration of the frameworks reviewed in this section, may provide insight and understanding as to what factors may set the scene for anorexia to occur. No single factor can operate independently to produce anorexia. Together however, the factors become volatile. (See Appendix A for a qualitative account of the "Two-Selves".)

Summary of the Literature Review

The review of the literature has discussed approaches to anorexia nervosa from a number of theoretical frameworks including: physiological, behavioral, socio-cultural, familial and individual psychopathology. Each of the approaches has provided insight into various components of the disorder. It is clear however, that no single theory or approach, has fully explained the complexity of the disorder. It seems that the limitations of one extant theory or approach may be addressed by another.

Most of the literature presented thus far has evolved from a traditional deductive approach to theory construction and testing. Observations were made, generally from a specific theoretical orientation, and propositions based on the constructs outlined by that particular orientation were presented. These constructs were then tested utilizing quantitative methodologies and the propositions of the theory were supported or rejected. While this approach to the study of anorexia nervosa has provided us with valuable information regarding the individual and her family, it seems that only pieces of the puzzle have been solved. How these pieces fit together to produce an entire picture of the illness, seems to be lacking.

In the following chapter of the thesis, a rationale for the development of a new approach to anorexia nervosa will be presented. The chapter will initially provide an overview of the traditional approach to theorizing in the social sciences, followed by a critique of this approach for the study of anorexia nervosa. Finally, a rationale will be developed for deviating from this approach in the construction of a model of anorexia nervosa from a new perspective.

CHAPTER IV

THEORETICAL FRAMEWORK: FROM MAINSTREAM THEORIZING TO A HUMAN ECOLOGY APPROACH

Previous literature on anorexia nervosa, has followed a mainstream approach to the development and testing of theories on the illness. Except for the few qualitative studies completed from a constructivist paradigm (James, 1990; Santopintpo, 1989), a (post)positivist paradigm has prevailed. Although considerable knowledge of the illness has been generated from this perspective, it seems a new approach is needed which may allow for the integration extant knowledge and an identification of areas requiring future research. Ultimately, a new approach to anorexia nervosa may facilitate greater understanding of the illness for anorexics, their families and practitioners.

In the following chapter of the thesis, a brief presentation of the definition, construction and evaluation of mainstream theorizing will be outlined. From this, a rationale for the development of a new approach to anorexia nervosa will be presented. In the final section of the chapter, a human ecology perspective will be proposed as the framework for a new, unique model of the etiological and perpetuating factors of anorexia nervosa.

Mainstream Theorizing in Human Sciences: Definitions, Methods of Construction and Evaluation

Many different definitions for theory can be found in the literature. Although most theorists "know" what theory is, consensus on a definition seems to be lacking (Bell, 1992, p. 292). A parsimonious, yet relatively clear definition of theory is that given by Kerlinger (1973). He defines theory as:

> "an interrelated set of constructs (concepts), definitions, and propositions that present a systematic view of phenomena by specifying relations among variables, with the purpose of explaining and predicting the phenomena" (p. 9).

In their discussion of family theory, Doherty, Boss, LaRossa, Schumm and Steinmetz (1993) state:

> "Theorizing is the process of systematically formulating and organizing ideas to understand a particular phenomenon. A theory is the set of interconnected ideas that emerge from this process." (p. 20).

Although there seem to be many different definitions to the word "theory", Bell (1992) suggests most theorists agree that a theory contains two important components. These are:

1) A theory is a causal explanation; and
2) A theory describes the real world.

These two central components imply a theory includes statements of causal relationships amoung variables variables of a phenomenon observed in the real world. The goal of developing theory is to be able to predict what will cause the occurrence of the phenomenon in the future and control or alter that potential (Burr, 1992).

Tzang and Jackson (1991) deliver one of the few recent papers that provides a methodological framework for theory construction and evaluation. These authors claim there are various forms of theory, and base their paper on the construction of a functional-deductive form of theory. They outline two additional concepts which may be mistaken for "theory". These include models and perspectives. While they are similar to theories, models and perspectives lack the goals or specification of a true theory. Models are:

> "not a theory but are often used as heuristic guides during the beginning phases of theory development. There is no intention that the model will be modified as a consequence of the results of the research. They are analogues and are useful only in that knowledge of a model system aids the understanding of another system" (p. 54).

Perspectives are:

> "conceptualizations or general speculations about an ecological topic that have not yet reached the status of a formalized theory. They generally lack relational statements, objectivity, systemization, and empirical testing" (p. 54).

From these definitions, it is important to note that some of the approaches to anorexia nervosa in the literature have been true theories, (Bruch, 1973, 1978; Crisp, 1980; Epling & Pierce, 1991; Minuchin et al., 1978; Selvini-Palazolli, 1978; Stierlin & Weber, 1989; Sours, 1980; White, 1983), while others are perspectives or models (Brumberg, 1988; Garfinkel & Garner, 1983; Orbach, 1986). Both provided valuable insight into the disorder, but the theories were subject to empirical testing while the models or perspectives were not.

Theory Function

Tzang and Jackson (1991) describe seven basic functions of a "good scientific theory" (p. 54). These include; 1) identifying the domain of the ecological phenomenon; 2) decomposition; 3) nomalogicalization; 4) establishment of causal relationships and dynamics; 5) explanation; 6) generation of future research and theorization; and 7) generating strategies for controlling.

Domain of ecological phenomena, or determining the area of study, is not considered a true function, but is a necessary process of determining the subject area of the investigation. **Decomposition** refers to the process of reducing and simplifying complex phenomena into manageable and understandable pieces of information. This involves isolating relevant variables and specifying parameters of that which is to be studied, providing precise definitions of terms and concepts, and providing a system of classification and organization. Decomposition includes the development of a systematic framework which may allow for consistency of items being classified and for organization of the statements of prediction and explanation.

Nomologicalization refers to linking of all components and concepts generated through the decomposition process in order to identify and explain the existence and relationships between the concepts.

Establishment of causal relationships and dynamics (or understanding) involves the delineation of causal mechanisms which link changes in certain independent variables with changes in the dependent variables. This "causal process" (p. 56) provides the foundation for the remaining functions of theory and constitutes the roots to the generation of scientific theory. The identification of causal relationships allows for explanation, prediction and generation of future research.

Scientific theory must be able to **explain** the nature and dynamics of both the present and the past. This may occur through the summative-inductive approach where events are explained by scientific laws derived from accumulation of empirical phenomena; or the functional-deductive approach which deducts statements from the research to explain the phenomena.

Prediction of future events by logical and empirical demonstration of the connections between two or more theoretical constructs is a major function of scientific theorization. Rationale for prediction is achieved by the theories power to logically and empirically explain causal relationships between past or present events, allowing for prediction of causal relationships among future events.

A theory should **stimulate further research and theorization** by pointing out new and unobserved relations, thus providing for the basis for the formulation of new research questions and hypothesis.

Finally, from a theory that has the ability to identify causal relationships and predict future events, strategies to **control** (or alter) human ecological events should be achieved. Tzang and Jackson (1991) note, however, that "some social phenomena may be organized, explained, predicted and understood, but remain uncontrollable" (p. 57).

Theory Construction

In order to ensure a theory is able to fulfil all of the functions outlined above, Tzang and Jackson (1991) point out that it is important that certain steps are taken in the construction of a scientific theory in the social sciences. From the list of functions of theory, steps to the construction of the theory follow each identified function closely.

First, from concentrated effort of examination and exploration of some ecological phenomena, the area of study may be narrowed down from a global domain of ecological phenomena to a specific domain of ecological phenomena by identifying what the theory will study and how it differs from other theories in the field.

Second, **postulates**, or basic assumptions which are accepted without question or test, must be identified. These may be broad assumptions about nature or specific to the theory.

Propositions or basic principles must then be specified. These are relational statements about the ecological characteristics under study. The statements generally make assertions of causality, but sometimes may be limited to assertions of correlation. The propositions must also include a formal system of organization. This is crucial as it will subsequently determine what major variables the theory will address and how the data will be analyzed, interpreted and inferred. To fulfil the requirements of scientific theory, all propositions should fulfil the functions of explanation, prediction and further theorization.

The next step in theory construction involves the defining of constructs. A **construct** is an "abstract statement about relationships involving intangible processes, which refer to underlying psychological realities" (Tzang & Jackson, 1991, p. 59). Constructs help interpret, but are not related directly to observable events.

Following the definition of constucts, a descision must be made regarding how the constructs may be empirically observed. This involves **operationalizing** constructs and specifying the rules of observation, the measurement tools, the experimental techniques, and the statistical design. Operationalization of key theoretical constructs is one of the most important areas of theory construction which facilitates the scientific understanding of reason for the theory (Katzell & Thompson, 1990).

Identification of the **independent, dependent and intervening variables** follows operationalization of constructs. From this, **hypotheses** are outlined for empirical assessment. A hypothesis is a predictive statement about the relationships among independent, dependent and intervening variables. The process of operationalizing the hypothesis refers to the art of generating the hypothesis such that they may be subject to empirical testing. Once the hypotheses have been subject to empirical investigation, they are either rejected or retained. Hypothesis which receive repeated empirical support may become an empirical fact. Those that are rejected weaken the theory and are subject to reformulation and retesting. Once enough empirical support has been received for hypotheses, they may become "logically deduced propositions" which are eventually considered "laws" or a group of "facts" which may be formed into generalized statements of an observable phenomena. From these generalizations, inferences to other similar content issues with the same ecological domain may be formulated.

In summary, theory construction involves isolation of a topic in a particular ecological domain, delineation of assumptions, assertion of propositions, definition of constructs, identification of variables and formation of testable hypotheses. The theory is then tested by empirical investigation and hypotheses are accepted or rejected. Those rejected are reformulated and the theory is altered, and hypotheses are retested until they require no further verification to be considered an absolute or a fact, generalizable to other issues in the same ecological domain.

Evaluation of Theories

Theories are evaluated based on seven criteria. These include: a) formalization and coherence, b) integration and comprehensiveness, c) parsimoniousness, d) falsifiability and testability, e) applicability to empirical data, f) fruitfulness, and g) scientific self-regulation. In other words, a scientific theory must be formal, systematic, clear, consistent, logical and accurate. The components of the theory must be explicitly defined and categorized, and understood clearly as related to the theory. The theory must be flexible enough to accommodate new evidence, but not so loose that it loses organization and explanatory power. A good theory should account for reality and be able to undergo repeated investigation within the same ecological domain. Fruitfulness, refers to the amount and importance of subsequent empirical research a theory generates. Finally, a good theory should keep itself in-check, by being able to withstand continual empirical objectivity and replicability.

Mainstream Theorizing Applied to Anorexia Nervosa

Theories of anorexia appear to have been developed following mainstream theorization methodology. Although obvious difficulties are apparent in some of the theories, most have been subject to rigorous empirical testing. Few have received consistent empirical support for all hypotheses, and therefore, according to Tzang & Jackson (1991), are not generalizable. No theory proposed to date has received enough empirical verification to fully explain the phenomenon, and to make generalized statements regarding prediction and control of the disorder.

Bell (1992), has taken a slightly different approach to theorization. From his perspective, there are levels of theory construction. He describes three levels of theory, which help to clarify the domain of the ecological phenomena. **Theoretical orientations** are "programmatic statements that give direction on how the world is to be oriented". They are large governing frameworks which consist of "definitions, orienting statements and assertions" (p. 298). Theoretical orientations therefore include the assumptions and propositions described by Tzang & Jackson (1991), make assertions of causal relationships, but are non-specific to particular empirical situations.

Theories from Bell's (1992) perspective are causal explanations of the same causal logic of the orientation, but are applied to some class of empirical situations. They therefore identify the actors of a particular phenomenon, and propose causal relationships between the constructs that may be confirmed or disconfirmed through empirical testing. Bell (1992), however, indicates that theories are only testable indirectly and subdivides the identification of variables and generating of hypotheses into the next level of theory.

Hypotheses, then are the final level of a theory, and consist of statements of relationships between variables that may be subject to empirical testing. Therefore, with each level of theory, the actors, the relationship between constructs and direction of the relationships between the variables becomes more specific. Hypotheses may be directly confirmed or disconfirmed through scientific testing.

Although the division of theory into levels may seem like academic rhetoric, the purpose of viewing theories from this perspective helps to clarify situations in the real world. In the human sciences, it is possible to identify a "theory" that has been used to explain dozens of phenomena. For example, psychodynamic theory has been used as an explanation for depression, agoraphobia, schizophrenia, anorexia nervosa and a host of other "disorders". Viewing it as a theory as described by Tzang & Jackson (1991) is confusing. How can the same theory be applied to, and explain so many different phenomena? Perhaps psychodynamic theory may be viewed as a theoretical orientation or framework, which can be applied to specific actors and constructs for a more defined situation. Applicable components of the theory may then be tested through hypotheses. General theoretical orientations may be used as an approach to explain a variety of phenomena. Theory and hypotheses for agoraphobia and anorexia nervosa may be from the same theoretical orientation, but applied differently to different phenomena.

As was explained in the review of extant literature of anorexia nervosa, the approaches to anorexia to date, have been from a variety of theoretical orientations applied in theory and hypotheses to anorexia. What is frustrating, however, is the lack of flexibility in the theories. The observations from clinicians of anorexics and families have been forced into theoretical frameworks, and the constructs used in the theories are generic and have been applied to a variety of so-called psychosomatic problems. The family systems approaches, for example, are based from theoretical frameworks used to explain a variety of family problems. Many of the hypotheses derived from these theories have produced equivocal results. It seems that the rigor and specificity of (post)positivistic theorizing has been marginally successful in explaining anorexia, and has been unsuccessful in determining a cause, and developing consequent strategies for prediction and control.

A number of social scientists are beginning to question the value of positivistic, rigorous theory building, testing and evaluating (Burr, 1993; Sprey, 1988; Thomas & Wilcox, 1987). Fueled by challenges from new epistemologies such as hermeneutics, critical theorizing and feminism, a debate builds regarding whether the mainstream approach to human sciences can be viewed as the most reliable and useful means of gaining information which has pragmatic relevance. Perhaps exploration of a new paradigm for studying anorexia nervosa may prove to be fruitful.

In a recent article by Burr (1992), a dialectical analysis of scientific paradigms was presented. In this article, four paradigms were identified: positivism, interpretive science, critical/emancipatory and the ecological systems approach. Since a multidimensional perspective has been suggested as the most appropriate means of viewing anorexia nervosa (Vandereycken et al., 1989), the ecosystemic paradigm which recognises the interactions between many systems, may be suitable in advancing present knowledge and understanding of the problem.

The rationale for choosing an ecosystemic (or human ecology) paradigm as the guiding framework for the development of a model of anorexia nervosa, has therefore been derived through a slow process of reading, observation and critiquing of extant theories in the mainstream tradition. It is hoped that a new paradigm may spur future research from a new perspective that may help advance understanding of the disorder for victims, their families and helping professionals.

Theoretical Framework:
A Human Ecology Perspective

Human Ecology is a relatively new discipline that has gained strength in the past few decades and has challenged mainstream positivist science (Burr, 1992). As an interdisciplinary field, human ecology can be defined as:

> "the study of humans as social, physical,
> biological beings in interaction with each other
> and with their physical, socio-cultural,

> aesthetic, and biological environments, and with the material and human resources of these environments. The uniqueness of human ecology lies in its focus on viewing humans and their near environments as integrated wholes, mutually influencing each other" (Bulboz & Sontag, 1988, p. 3).

Human ecology represents a synthesis of assumptions, concepts and propositions from several disciplines and from general systems theory. It is a framework which incorporates basic assumptions from systems theory, including connections between parts and wholes, input, output, transformational rules, and levels of feedback into a theory where the actors are the individual, family, society and the greater environment. The basic premises of human ecology theory are that: 1) the actors (individuals, families, society and the environment) are an ecosystem and the parts and the wholes are interdependent; 2) the multilevel system and functions (including physical-biological sustenance, economic maintenance and psychosocial and nurturance functions) must be examined in relation to each other over time; and 3) all peoples and the world's ecological health depends on interdependence of people with each other and environmental resources. The quality of life and the quality of the environment are interdependent and the well-being of individuals and families cannot be considered apart from the well-being of the whole ecosystem. Therefore, in research, service and support of individuals or families, an ecological perspective begins with the whole rather than the separate components (Bulboz & Sontag, 1993).

The objectives of a human ecology perspective are to gain knowledge that can be used to help individuals and families interact more effectively with their environment (Burr, 1992). Although human ecology stems from a general systems approach, there are differences in assumptions. Where the objectives of general systems theory attempt to identify aspects of systems that are universal or common to all systems, human ecology operates from indeterministic, choice oriented assumptions (Bulboz & Sontag, 1993). Individual's choices and values are key to the philosophy, and reality is believed to be the patterns and processes of individuals as they interact with their environments (Burr, 1992; Bubolz & Sontag, 1993). Reasoning and observation are used as a means of identifying holistic patterns of interaction, with the goal of helping individuals and families improve the quality of life. Proponents of a human ecology framework believe that:

> "humans live in a complex set of enmeshed and interacting systems and understanding the ecological relationships helps humans make informed, wise choices" (Burr, 1992, p. 401)

For the study of anorexia nervosa, a human ecology framework makes sense. As advocated by a number of professionals in the field, a multidisciplinary approach to the study of anorexia is warranted (Garfinkel, 1991; Sohlberg & Strober, 1994; Thompson, 1993; Vandereycken et al., 1989). A human ecology framework, with a focus on the interacting patterns of the individual with the biological, familial, socio-cultural and environmental systems provides a basis for understanding of the complex set of relationships impacting on the development and perpetuation of the disorder. In addition, a human ecology framework considers the concept of time, recognizing that components of any system, as well as the system as a whole change over time. Adaptation to the changes are a key function of systems in order to continue to live in harmony with the changing near and far environments (Bulboz & Sontag, 1993).

In the following chapters of this thesis, a human ecology framework will be applied to the study of anorexia and a model of the etiological and perpetuating factors will be developed. The model will be based on extant literature, integrated with subjective data from qualitative and autobiographical accounts of the lived experience. The model will therefore synthesize information about anorexia from a variety of disciplines and perspectives with the end goal of providing a visual representation of what is known about the disorder and what remains ambiguous. Following with the basic premise of the human ecology perspective, the main objective in the presentation of the model is to serve as a tool to aid anorexics, their families and helping professionals understand the disorder and move towards the development of effective treatment measures.

CHAPTER V: PRESENTATION OF A MODEL OF ANOREXIA NERVOSA FROM A HUMAN ECOLOGY PERSPECTIVE

The theories presented thus far examine certain components of anorexia nervosa at specific stages of the disorder. Theories developed through clinical observation, tend to focus on characteristics of anorexics and their families during the pre-anorexic stages and are based on retrospective information. Empirical data focuses on individual behaviours and family interactions during the acute stage of the disorder. Outcome data focuses on the anorexic's medical, psychological and social condition at a minimum of one year following onset of the disorder. Because of specific challenges faced by the anorexic and her parents at these different stages of the illness, it is not surprising to find inconsistencies between the clinically derived theories, and empirical data. Although each of the extant theories has aided in explaining certain pieces of the anorexia puzzle, as yet it is unclear how these pieces fit together into a full picture of the illness. In this chapter, a new approach to anorexia nervosa is proposed. A human ecology perspective, which recognises the interacting effects between the individual and her environments as they evolve and change over time, provides the framework for the construction of a model that may facilitate greater understanding of the complexity of the disorder.

In this chapter of the thesis, a series of illustrations will be presented representing clinically and/or empirically supported components of the various theories outlined in the previous chapters. Each illustration will be presented in chronological order, depicting the salience of particular influencing factors during the development of the individual and family. The integration of these vignettes along a time line extending from the marriage of the parents to the post acute stage of anorexia nervosa will depict the progressional nature of the disorder. The resulting holistic model of anorexia nervosa, will highlight the interactive and changing effects of the various systems within the individual's environments which may combine to produce a susceptibility to the development and maintenance of the illness.

The model of anorexia nervosa from a human ecology perspective will evolve from the integration of five separate illustrations. The first depicts the relationship of the parents to each other and to their family of origin at the time of their marriage and during the child rearing stages of the family life cycle. This model will be developed based on intergenerational family systems theory. The theory is an expansion of White's (1983) intergenerational theory of anorexia nervosa, incorporating recent concepts from general intergenerational family systems theory. The second illustration outlines the triadic interactive patterns between the parents and the (pre)anorexic prior to the onset of the disorder. A description of how these relational patterns may have evolved accompanies the illustration, based on an integration of intergenerational concepts and extant data regarding the pre-morbid characteristics of the anorexic. The third illustration depicts the onset of anorexia nervosa, outlining the impact of socio-cultural influences. A portrayal of the inner world of the anorexic is represented in the fourth figure, supported by personality and self-psychology literature. In the fifth illustration, figures one through four will be incorporated into a holistic model of the etiological factors of anorexia nervosa. Figure 5 will also depict possible factors influencing maintenance of the disorder including familial patterns of interaction during the acute stage of the disorder and the biological effects of starvation. Figure 6 will include possible outcome routes by integrating prognostic data. Figure 6 therefore depicts anorexia nervosa from a human ecology perspective, identifying factors which may interact over time to create a susceptibility to the development, perpetuation and outcome of the disorder.

Integration of Intergenerational Family Systems Theory

In developing a holistic model of anorexia nervosa within a human ecology perspective, all systems which may impact on an individual's life must be considered. As described in the previous chapter, considerable research has been focused on the individual, the immediate family and society. Little attention however, has addressed the extended family or community. Although patterns of interaction within the immediate family of anorexics have been identified as possible contributing factors to the development of the disorder, the origin of these patterns and the reasons this child, the (pre)anorexic, is specifically effected by them, remains unclear.

Recent family studies literature in the family studies discipline, suggests that parents' childhood experiences and relational patterns with their family of origin influence the quality of their marriage, their parenting styles and subsequent developmental and health outcomes of their offspring (Dawson, 1991; Gable et al., 1992; Ricks, 1985; Snyder & Huntley, 1990; Sroufe, 1991). Of particular interest is the application of an intergenerational family systems theory in the prediction and assessment of physical or psychological health distress in family members. Recent investigations have identified patterns of familial interaction which are carried from generation to generation that may be correlated with physical or psychological health distress in either the parents or their offspring (Bray, Harvey & Williamson, 1987; Harvey, Curry & Bray, 1991;

Harvey & Bray, 1991). These patterns are similar to those identified by the family systems theorists in the families of anorexics (Minuchin et al., 1978; Selvini-Palazolli, 1978; Stierlin & Weber, 1989; White, 1983). Although there has been little effort to assess intergenerational variables in the families of anorexics, these variables may be important factors to consider and may help to explain the origin of certain attitudes and patterns of interaction.

The basic premise of intergenerational family systems theory is that attitudes and patterns of interaction are carried from one generation to the next. The beliefs and relational patterns an individual experiences as a child, will form the foundation for interactional patterns within their own family of procreation. Intergenerational theorists propose that difficulties may arise when an individual's loyalties to their family of origin are dominant, rendering it difficult for them to separate and individuate, and develop meaningful relationships with a spouse and their own nuclear family (Boszormenyi-Nagi, Grunebaum, & Ulrich, 1991; Bowen, 1978).

From an intergenerational perspective, there are two forms of influence from the extended family that may impede separation from the family of origin and interfere with relationships within an individual's immediate family. These include direct and indirect influence. Direct influence refers to the physical presence of a family of origin member (usually a grandparent) in the nuclear family. Indirect influence refers to the attitudes or "introjects" (Vanderlinden et al., 1989, p. 322) regarding family structure, function, roles and standards that an individual learns from the family of origin and upholds in the formation of the nuclear family. Both direct and indirect influences have been noted in some anorexia nervosa literature. Numerous clinical reports (Beattie, 1988; Bruch, 1988; Selvini-Palazolli, 1978; Conrad, 1977; Sperling & Massing, 1972; Stierlin & Weber, 1989; Vanderlinden, et al., 1989; Viaro, 1990; White, 1983), autobiographical accounts (Heater, 1983; Johnston, 1993; MacLeod, 1981) and qualitative studies (James, 1990; Ohler-Madsen 1992a, 1992b) have suggested the relationship between the immediate family of the anorexic and their extended family(ies) are unusually close. From White's (1983) perspective, families of anorexics display "too richly cross joined boundaries" (p. 256). Indirect influences are more difficult to identify, but seem to be very strong within the anorectic family system (Perednia & Vandereycken, 1989; Stierlin & Weber, 1989; White, 1983; Vanderlinden et al., 1989). Attitudinal and interactional patterns which are consistently found in families of anorexics include the maintenance of traditional family roles, being successful, projecting a facade of family happiness and perfection, and maintaining a strong commitment towards upholding a respected family name (Atkins & Silber, 1993; Heron & Leheup, 1984; Heater, 1983; Humphrey, 1989; Kog & Vandereycken, 1989; MacLeod, 1981; Ohler-Madsen, 1992a, 1992b; Stierlin & Weber, 1989; Telerant et al., 1992; White, 1983; Vanderlinden et al., 1989). It is posited by intergenerational theorists that these values and attitudes are introjects which have been passed on for generations, impacting heavily on families as they progress through the stages of family development (White, 1983; Vanderlinden et al. 1989).

Intergenerational family theorists propose, that patterns of interaction and standards of conduct are also passed down through generations. If for example, the mother of an anorexic was/is enmeshed with her mother, it is likely she will develop the same relationship with her daughter (Williamson, 1982a, 1982b). If the family paradigm proscribes a mother/nurturer; father/breadwinner role tradition, it is likely that these same roles will be expected of the children. Emphasis on living up to family standards may take precedence in the family, and interpersonal needs and relationships may become less of a priority than upholding family tradition. Marital relationships, parenting and consequent physiological and/or psychological health of the family members may suffer (Boszormenyi-Nagi et al., 1991; Harvey et al., 1991; Harvey & Bray, 1991; Sroufe, 1991; White, 1983).

From the descriptions of the families of anorexics in the literature, it seems that the concepts described by intergenerational theorists may fit. The family facade of happiness and perfection observed by clinicians in anorectic families (Bemporad & Ratey, 1985; Heuron & Leuhep, 1984;

Humphrey, 1988, cited in Vandereycken et al., 1989; Lewis & McGuire, 1985; Stierlin & Weber, 1989; Telerant et al., 1992) may equate with their attempts to live up to intergenerationally transmitted family standards. Similarly, the secret alliances and triangulation noted by other clinicians (Dare, 1985; Goldstein, 1981; Harper, 1983; Houben, 1981; Minuchin et al., 1978; Selvini-Palazolli, 1978; Stierlin & Weber, 1989) are patterns described by intergenerational theorists as resultant of hidden agendas for the family to maintain intergenerational standards of excellence.

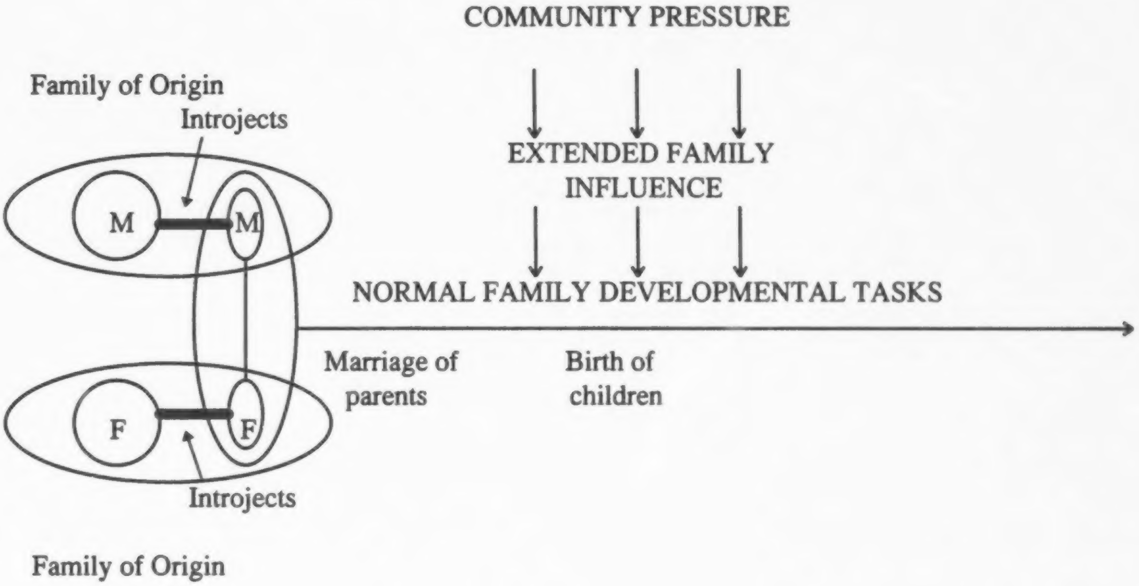
Although there has only been limited research conducted on the parents of anorexics, it seems that clinical reports have identified hidden patterns of marital discord in the families they have treated (Bemporad & Ratey, 1985; Lewis & McGuire, 1985; Humphrey, 1988; Sergeant & Silver, 1983; Telerant et al., 1992). Unmet emotional needs and sexual dissatisfaction are believed to be evident in the parental relationship (Perednia & Vandereycken, 1989). From an intergenerational perspective, these interactive patterns may be due, in part, to too richly cross-joined boundaries between one or both parents and their family of origin. This is believed to stem back to the time of the marriage and is a pattern which maintains itself throughout the development of their own family (Bray et al., 1987; Bray & Harvey, 1989; Harvey et al., 1991; Harvey & Bray, 1991; Williamson, 1982a, 1982b).

In summary, a lack of separation from the family of origin by one or both parent(s) of the anorexic, may have interfered with their ability to bond intimately with their spouse at the time of their marriage. The result may be unmet emotional needs, potential sexual dissatisfaction, and possible negative health outcomes in themselves and/or their children. Intergenerational influences from the family of origin on the marriage of the parents of an anorexic are illustrated in Figure 1.

Each partner in the marriage, takes with them the introjects from their family of origin. In the case of anorexia nervosa, these introjects including upholding the family name, being successful, fulfilling traditional family roles and being loyal to the members of the family, continue to govern the family as the parents have children and progress along the early stages of the family life cycle (Bruch, 1978, 1988; Stierlin & Weber, 1989; Slade, 1982; Viaro, 1990; White, 1983).

Families of anorexics tend to strive to demonstrate success through material wealth and upholding a respectful position within the community (Perednia & Vandereycken, 1989; Stierlin & Weber, 1989; Turner, 1990; Vanderlinden et al., 1989; White, 1983). Community expectations of the family have often been established by the previous generation, and continue to be salient to the nuclear family. Outward appearances tend to be of utmost importance and respect from the community must be maintained (Kaffman & Sadeh, 1989; Ohler-Madsen, 1992a, 1992b; Stierlin & Weber, 1989; Vanderlinden et al., 1989). Thus, both extended family and community pressures impact on the family as it progresses through the child rearing stages of the family life cycle. Figure 1 represents the marriage of the parents and the external influences on the family during the early years of development.

Figure I: EXTERNAL PRESSURES ON THE DEVELOPMENT OF THE FAMILY


COMMUNITY PRESSURE
Family of Origin
Introjects
EXTENDED FAMILY
INFLUENCE
M
M
NORMAL FAMILY DEVELOPMENTAL TASKS
Marriage of
parents
Birth of
children
F
F
Introjects
Family of Origin

As the family progresses, change is inevitable. Pressures from both internal (individual family members) and external (community, society) sources require that the family evolve and adapt to new situations. This normally causes stress to any family. Add to these normal maturational stressors, additional pressures to uphold the family name, maintain respect within the community and model a "perfect" family, and family tension may escalate. Intergenerational theorists suggest that this may be intensified when one or both of the parents is struggling with "split loyalties"[9] between their family of origin and their own family of procreation (Boszormenyi-Nagi et al., 1991; Harvey et al., 1991; White 1983). Certain patterns of interaction may develop in order to cope with, and/or hide familial stress. The interactive patterns identified by clinicians in anorectic families, including avoidance of conflict, overprotectionism, marital discord, and triangulation may have been developed as a result of, or a means of coping with, the extreme familial stress.

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[9] **Filial Loyalty** is a key concept in intergenerational family systems theory. Loyalty refers to a sense of trustworthiness that a child can expect from his family of origin and a coinciding obligation or indebtedness he has to his parents and to the family merit. It is a deeply ingrained commitment a child has to the family, based on assumptions of fairness and of give and take (Boszormenyi-Yagi et al., 1991). A split loyalty occurs when an individual is torn between loyalties to more than one person or family.

As noted by clinicians, traditional role expectations are generally important in the families of anorexics. Thus, the mother/nurturer, father/breadwinner role pattern is fulfilled, often at the expense of the marital and familial relationships (Stierlin & Weber, 1989; Vanderlinden et al., 1989). The father[10] may become distant from the family as his energies are concentrated on providing financially for the family and maintaining a materialistic image of success (Selvini-Palazolli & Viaro, 1988; Stierlin & Weber, 1989). It is believed that the mother may then enlist a third party, in this case a daughter, to fulfil unmet emotional needs. This concept has been identified by Minuchin and colleagues (1978) and Selvini-Palazolli (1978), as triangulation. The triadic relationship between the mother, father and daughter, where the daughter is caught up in the marriage and acts as a mediator of conflict has been labelled a three-way matrimony (Selvini-Palazolli, 1978). Both of these concepts are similar to those proposed in intergenerational family systems theory, and seem to make sense in the anorectic family when viewed from the broader ecological perspective.

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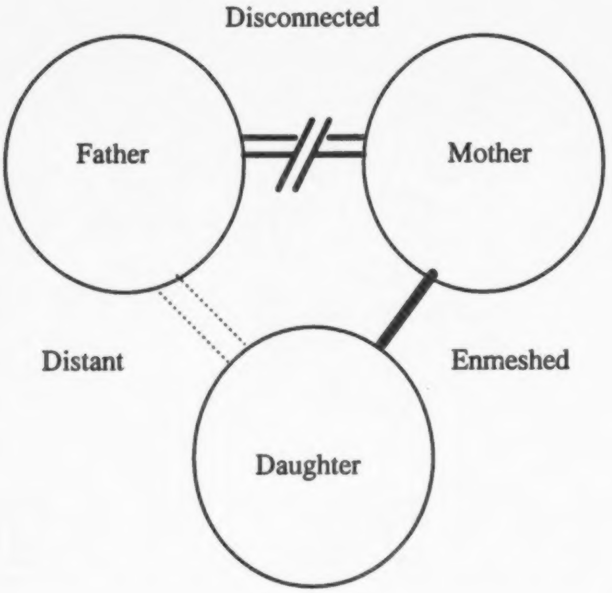
[10] Note that some researchers indicate a role reversal where mother is more domineering and takes on the breadwinner role. In these cases it seems the father takes on the nurturer role.

It is difficult to determine why the child who later becomes anorexic is the child that becomes enlisted into the parental relationship. However, recent data on the child's pre-morbid personality traits and possible childhood physiological ailments (Atkins & Silber, 1993; Ratsam, 1992), may help to explain the phenomenon. This young girl who has been noted to be especially sensitive, compliant and submissive, and who is driven incessantly towards pleasing others, may fall prey to the unconscious needs of her parent(s). Recent literature has suggested a significant number of anorexics have histories of childhood medical trauma (Atkins & Silber (33%), 1993; Ratsam (67%), 1992

(67%); Telerant et al. (80%), 1992). These medical traumas may be genetically based reactions to stress which are percipitated during particularily stressful periods within family development. Assuming the parent(s), particularly the mother, may be in a situation of unmet emotional needs, caring for a sick child may fulfil some of those needs. Thus, the parent(s) may become overprotective and enmesh with that child, a phenomenon referred to in psychosomatic literature as the "vulnerable child syndrome" (Atkins & Silber, 1993, p. 215). The triadic pattern of interaction that may result from this situation, which also seems to be supported through the clinical and empirical literature is depicted in Figure 2. In this relationship, the interactive pattern between the mother and daughter is enmeshed. The relationship between the father daughter is distant, and marital discord, or a disconnected relationship seems evident between the parents.

At adolescence, natural maturational needs for autonomy and independence in the daughter begin to surface. Societal pressures of conformity generally begin to have more impact

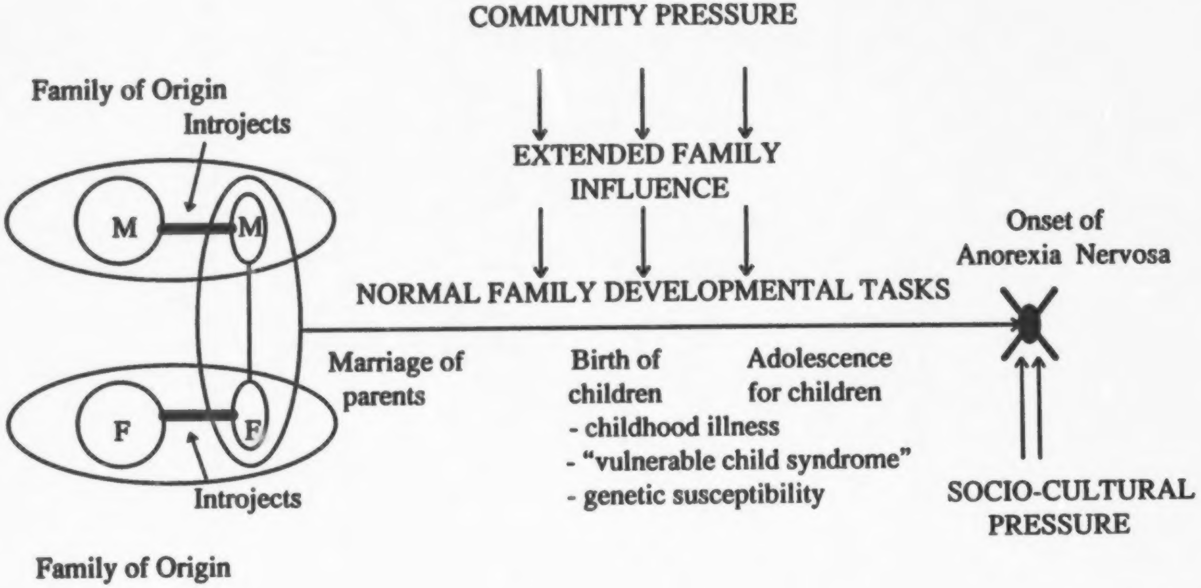
FIGURE II: PRE-ANOREXIC MOTHER/FATHER/DAUGHTER RELATIONSHIP


Disconnected
Father
Mother
Distant
Enmeshed
Daughter

on developing children during the adolescent years (Snyder & Huntley, 1990). For families where success and achievement are a governing rule, and children are expected to meet family standards, societal images of perfection may become the goals children attempt to meet (Sroufe, 1991).

For women, society's image of perfection include the thin, fit, successful business woman, who is also a successful mother and sexual partner (Boskind-White & White, 1983; Fraad, 1990; Mahowald, 1992; Turner, 1990). A young girl, driven obsessively towards perfectionism may be particularly vulnerable to this image and strive relentlessly to achieve it. Coupled with a strong need to demonstrate autonomy and to separate from a stifling enmeshed relationship, the impact of this societal message may be volatile. Striving for this image, may provide the avenue desired by this individual to demonstrate autonomy and perfectionism. In Figure 3, socio-cultural influences are integrated into the model depicting the progression of family development through the child rearing stages.

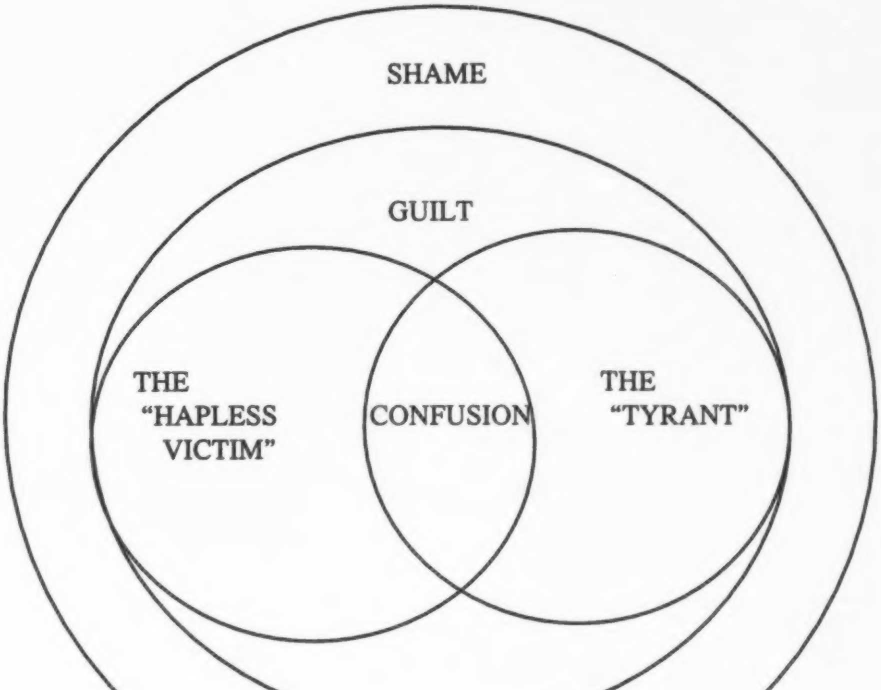
FIGURE III: INTEGRATION OF SOCIO-CULTURAL INFLUENCES


COMMUNITY PRESSURE
EXTENDED FAMILY INFLUENCE
NORMAL FAMILY DEVELOPMENTAL TASKS
Family of Origin
Introjects
M
M
F
F
Introjects
Family of Origin
Marriage of parents
Birth of children
- childhood illness
- "vulnerable child syndrome"
- genetic susceptibility
Adolescence for children
Onset of Anorexia Nervosa
SOCIO-CULTURAL PRESSURE

In the daughter's attempts to achieve autonomy and societal standards of perfection, an inner conflict arises (Bruch, 1988; Mahowald, 1992; Ohler-Madsen, 1992b; Spignesi, 1986). Because this child has been engulfed in an enmeshed relationship with her mother throughout her life, her attempts to break away and become independent are met with rejection. Her attempts to achieve autonomy, at about the same time her siblings may also be reaching adolescence and/or leaving the family home, may create an imbalance within the family system. In her struggles for independence, she may reject her position of "scapegoat", and familial patterns may become overtly conflictual (Bemporad & Ratey, 1985; Humphrey, 1989; Lewis & McGuire, 1985; Martin, 1990). Although striving for autonomy provides the adolescent with a much needed sense of self-control, it also disrupts her sense of security and jeopardizes her special position within the family. From a psychodynamic perspective (Armstrong & Roth, 1989; Bruch, 1973, 1978, 1988; Roth & Armstrong, 1990; Stiener, 1989; Steiger et al., 1989; Steiger & Houle, 1991; Smolak & Levine, 1993), the attempts at separation and individuation are met with fear and anxiety. As a result, the young girl may regress to, or stagnate at, an immature state of functioning. The incohesive self described by self-psychologists as an indication of an immature personality structure, becomes intense and a battle between the "two selves" ensues.

A "push-pull dance" (Fischer, 1989) or an inner battle experienced by the anorexic (Bruch, 1978, 1988; Heater, 1983; MacLeod, 1981; Johnston, 1993; Ohler-Madsen, 1992a, 1992b; Spignesi, 1986), grows in intensity. The internal battle for autonomy and control vs. dependence and submission rages. Resultant of the battle between the selves are extreme feelings of shame and guilt for the young female - shame for her weaknesses and for not fulfilling familial expectations; and guilt for hurting her parents by attempts to separate from them. The inner world of the anorexic is depicted in Figure 4.

FIGURE IV: THE INNER WORLD OF THE ANOREXIC


SHAME
GUILT
THE "HAPLESS VICTIM"
CONFUSION
THE "TYRANT"
STRUGGLE FOR CONTROL

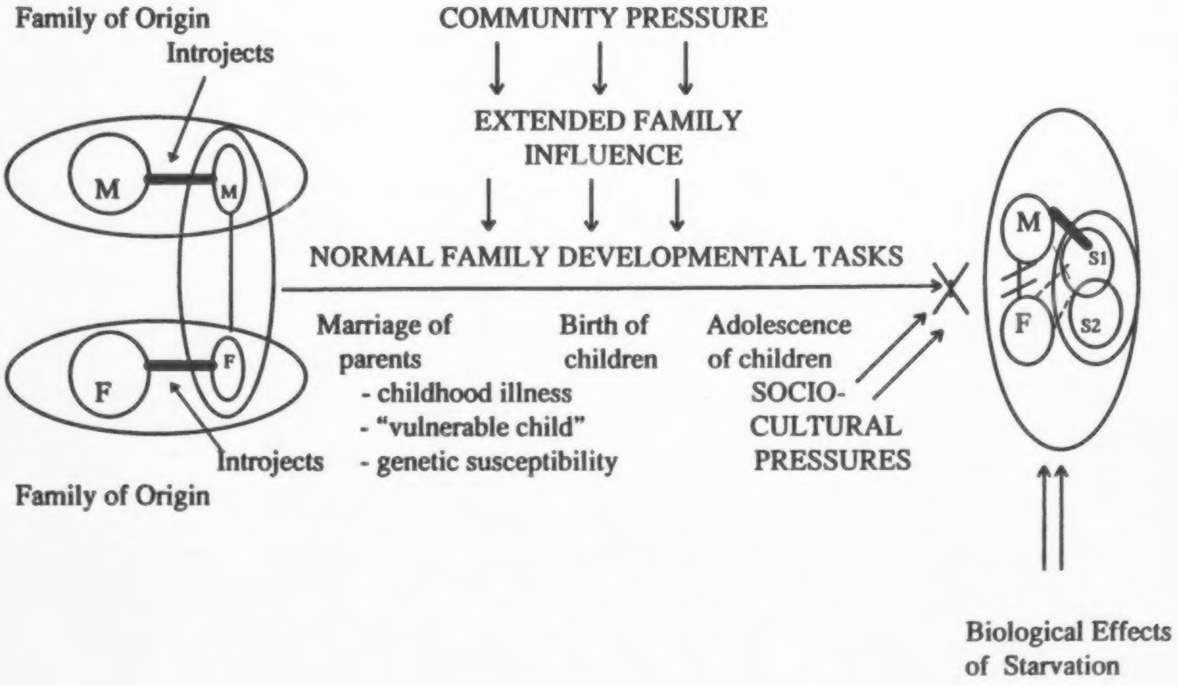
The battle between the selves continues, and the individual oscillates between striving for independence (through rigid control of dieting, exercise and obsessive efforts towards academic and/or sport achievement), and remaining protected and controlled (remaining meek and protected, needy and submissive to parental control). The problem however, also emerges as a solution. Through excessive dieting and control, the young female may be fulfilling societal and family expectations for success and achievement. At the same time, the little girl physique she has achieved, presents an image of weakness and submissiveness, maintaining a reason for a continued enmeshed relationship with her mother. Through her anorexia, she has fulfilled both her own needs and the needs of her parents.

Over time, the battle between the two selves intensifies. At times the "tyrant" is all powerful and controlling and monopolizes the individual's behavioral patterns. The "tyrant" is the controller, who rules the life of the anorexic and compels her towards starvation and physical and mental exhaustion. The "hapless victim" is the timid self, that surfaces occasionally and causes the anorexic extreme feelings of shame and guilt.

Patterns of interaction identified by the Structural Analysis of Social Behaviour (Benjamin, 1974), including a complex combination of mixed approaching and avoiding behaviors begin to make sense (Grigg et al., 1989; Humphrey, 1988, 1989; Humphrey & Strober, 1987; Sheppy et al. 1988). At times during the acute stage of the disorder, the "tyrant" is in control. Interactional patterns with the family at this time are conflictual and an overt battle between the parents and the anorexic may result. At other times however, the "hapless victim" surfaces. The interactions between the anorexic and the parents at this time are similar to old patterns of interaction - non-conflictual and appearing like a "happy family". This may explain the discrepancies noted in assessments of the patterns of interaction between the anorexic and the parents. Discrepancies between the clinical data and empirical assessments, and between different empirical investigations conducted at different points during the etiology of the disorder, may be explained by the understanding that the behaviour and personality of the anorexic may be disparate at different points in time.

Incorporating the inner world of the anorexic, with the previous four illustrations, provides a holistic description of the etiological and maintenance factors that may be involved in anorexia nervosa. As the disorder progresses to an acute stage, biological effects of starvation may begin to set in. Depression and impairment of cognitive functioning may render it difficult to deal with the anorexic. The disorder may become a "self perpetuating illness" (Garfinkel & Kaplan, 1985, p. 661). A model of contributing factors to the etiology and maintenance of anorexia nervosa is depicted in Figure 5.

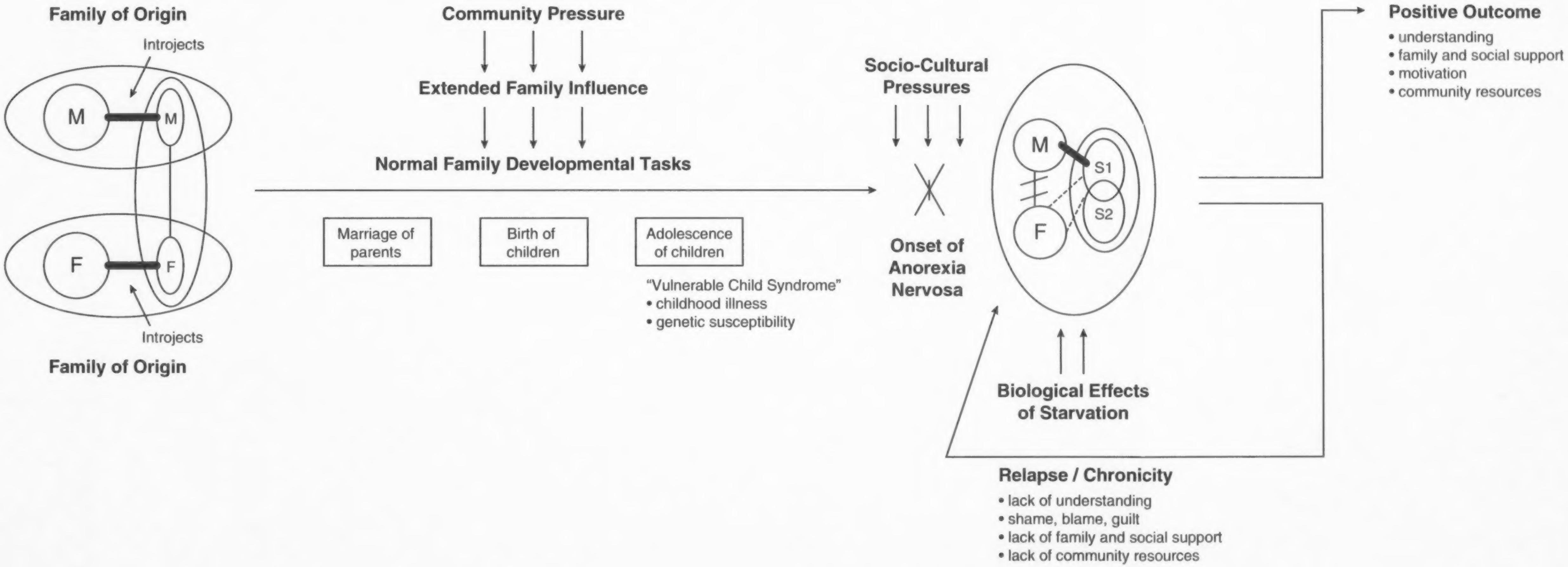
FIGURE V: A HOLISTIC MODEL OF THE ETIOLOGICAL AND MAINTENANCE FACTORS IN ANOREXIA NERVOSA


Family of Origin
Introjects
M
M
F
F
Introjects
Family of Origin
COMMUNITY PRESSURE
EXTENDED FAMILY INFLUENCE
NORMAL FAMILY DEVELOPMENTAL TASKS
Marriage of parents
- childhood illness
- "vulnerable child"
- genetic susceptibility
Birth of children
Adolescence of children
SOCIO-CULTURAL PRESSURES
M
F
S1
S2
Biological Effects of Starvation

It is difficult to determine predictors of positive vs. negative outcome. A number of predictor variables have been hypothesized, including age of victim at onset, amount of family and other social support, family and/or individual therapy and influence of a significant other on the anorexic. As yet however, no conclusive evidence has been found (Noordenbos, 1992; Russell, 1992; Rathner, 1992). Factors which may predispose the anorexic to a favourable outcome include a family willing to admit to and deal with their problems, an individual with a determined mind set, and social, medical and/or psychological support. For most, however, the disorder becomes a lifetime battle (Rathner, 1992). Although the individual may no longer display DSM III-R symptoms of anorexia nervosa, continued abnormal attitudes and behaviour towards food often remain. In a number of cases, new difficulties in behaviour or health may surface to replace the anorexia nervosa (Rathner, 1992; Theander, 1992).

Thus far, the model has integrated intergenerational family systems theory (White, 1983), individual psychopathology, the vulnerable child syndrome and genetic susceptibility (Atkins & Silber, 1993; Ratsam, 1992; Sohlberg & Strober, 1994), self-psychology/structural-developmental personality theory (Brighton-Cleghorn, 1987; Swift & Wonderlich, 1988), psychodynamics (Bruch, 1973, 1978, 1988; Crisp 1980), family psychodynamics (Stierlin & Weber, 1989), and the constructs of both communication and transaction (Selvini-Palazolli, 1978) and structural family systems theory (Minuchin et al., 1978). The model has identified when socio-cultural variables are most salient and outlines how the biological effects of starvation may perpetuate the disorder. In the final illustration (Figure 6), possible prognostic routes have been identified, resulting in a human ecology model of the etiological, maintenance and outcome factors of anorexia nervosa.

Figure VI: **Anorexia Nervosa from a Human Ecology Perspective**


Family of Origin
Introjects
M
M
F
F
Introjects
Family of Origin
Community Pressure
Extended Family Influence
Normal Family Developmental Tasks
Marriage of parents
Birth of children
Adolescence of children
"Vulnerable Child Syndrome"
• childhood illness
• genetic susceptibility
Socio-Cultural Pressures
Onset of Anorexia Nervosa
M
S1
S2
F
Biological Effects of Starvation
Positive Outcome
• understanding
• family and social support
• motivation
• community resources
Relapse / Chronicity
• lack of understanding
• shame, blame, guilt
• lack of family and social support
• lack of community resources

Summary

In this chapter, a human ecology model of anorexia nervosa has been developed by integrating extant theories and data from the clinical, empirical, qualitative and anecdotal literature.

A human ecology perspective has provided a framework from which the multidimensional and progressive nature of the disorder may be outlined. Thus, the many factors which may contribute to the development, perpetuation and outcome of anorexia nervosa have been integrated along a time line, which may hopefully facilitate greater understanding of the complexity of the illness for anorexics, their families and practitioners.

CHAPTER VI: AN OVERVIEW OF TREATMENTS FOR ANOREXIA NERVOSA

Prior to a discussion of possible applications of the model, a brief overview of the present status of treatments is warranted. The purpose of this discussion, is to review present treatment approaches, and illustrate possible reasons for their apparent ineffectiveness, based on the assumption that anorexia nervosa is rooted in a myriad of biological, psychological, familial and societal factors.

The Current Status of Treatments for Anorexia Nervosa

In a recent study of the current status of treatments for anorexia and bulimia, Herzog, Keller, and collegues (1992) reported there was little consensus among their sample of doctors including 67 psychiatrists, 51 psychologists, 35 social workers, and 30 other professionals, regarding appropriate treatment. The majority of clinicians (56%), seemed to indicate medical intervention combined with a talking therapy (either a cognitive-behavioral or psychodynamic approach) was most effective. Few agreed on the effectiveness of individual, group or family therapies, nor did they agree on the application of psychopharmeceudicals for the treatment of anorexia. In a review of the literature of diagnosis and treatment of anorexia nervosa by Kennedy and Garfinkel (1992), results similar to those of Herzog, Keller, and colleagues (1992) were reported. The authors of both of these studies suggest that advances in the treatment of anorexia have been minimal and results have been discouraging. In their conclusions both authors called for renewed interest in the development of more effective approaches to treatment of anorexia nervosa (Herzog, Keller et al., 1992; Kennedy & Garfinkel, 1992).

Despite the variety of therapy theories for anorexia extant in the literature, the above two "overviews" of treatment attest an obvious medical/psychiatric focus. Because medical insurance, both in Canada and the U.S.A. covers only medicalized treatments, it is feasible these "overviews" are representative of the current status of treatment.

Further evidence of a dominant, medical model of intervention in the treatment of anorexia is the recent publication of a "Guideline for the Treatment of Anorexia and Bulimia Nervosa" published by the American Psychiatric

Association (APA, 1992). The manual presents a guide for treating "eating disorders", aimed at general practitioners.

The goals of treatment outlined in the manual include interventions aimed at resolving:

1) malnutrition and other medically related problems;
2) psychological, behavioral and social deficits;
3) culturally mediated distortions.

The specific objectives of therapy include:

a. restoration of a healthy weight
b. restoration of healthy eating patterns
c. treatment/remedy of physical complications
d. challenging dysfunctional thoughts, feeling, beliefs
e. correcting defects in affect and behavioral regulation
f. improving associated psychological difficulties
g. enlisting family support of treatment where appropriate
h. preventing relapse.

The intervention guidelines suggested to achieve the above goals include:

1. Nutritional Rehabilitation: It is believed that weight restoration is the primary focus, and psychotherapy or family therapy will not be useful until the patient has reached a minimal target weight. The Body Mass Index (BMI) is the most common tool utilized in determining target weights. Both inpatient and outpatient programs are employed, but generally individuals below 20% of appropriate body weight are hospitalized.
2. Psychosocial Treatment: Although it is realized that psychotherapy or family therapy may be ineffective initially, the guideline suggests it is important to include the therapies from the beginning in a treatment program. The preferred approaches described in the guideline include the psychoanalytic, psychodynamic or cognitive-behavioral approaches. Family therapies or combined family and individual therapies are recommended for younger patients. It is suggested in the guide that psychotherapies and family therapies should be maintained following discharge from the

hospital. Medications and pharmaceudicals are generally not recommended except where depression exists. Anti-anxiety drugs are also suggested to help reduce anxiety regarding eating.

Except for the brief mention of the need to alter culturally mediated distortions about body image, there is no other mention of exploring and managing contextual influences in the treatment suggestions. The message conveyed by the manual is that anorexia is an individual's pathology. The individual is dysfunctional and their thoughts and behaviors need to be corrected.

The treatment models suggested for anorexia therefore include: medical intervention (behavioral and psychopharmeceudical) to restore weight and correct physiological complications; psychotherapy from a psychoanalytic/psychodynamic, cognitive-behavioral, or family approach; and/or the combination of the above in a multidimensional approach.

Although it seems that the therapeutic guidelines outlined by the manual consider biological, psychological and familial dysfunctions, treatment for each of these systems is suggested independently. Thus, the most commonly recommended treatment model appears disjointed. It seems that whether the discipline specific therapies are offered independently or in a multidimensional program, only a part of the problem is addressed at any one time. For an individual who may be struggling to achieve an "integrated self", the disintegration of the therapies may exacerbate, rather than solve the problem.

A Brief Overview of the Therapies

The majority of treatment programs available for anorexics and their families are based on the theories presented in Chapter III. Stemming from a mainstream approach to theorizing, the consequent therapy theories also follow a mainstream approach. As such the goals of therapy are to isolate a cause, and develop a cure for the problem (Gremillion, 1992; Penhold & Walker, 1983). Consistent with mainstream perspectives, the therapist is the expert and is able, based on the theory driving his/her particular therapeutic approach, to identify for the anorexic and her family what is wrong with them and design strategies to correct the abnormality (Gremillion, 1992; Rosewater, 1989).

To date, the most common approaches to therapy include: intensive psychoanalysis (Johnson, 1991; Stern, 1991; Wilson et al., 1991), medical intervention combined with stringent behaviourist programs (Eckert, 1983; Eckert & Mitchell, 1990; Hall, 1990; Levendunsky & Dooley, 1985; Tobin & Johnson, 1991); medical intervention utilizing psychopharmeceudicals (Kennedy & Shapiro, 1993); cognitive-behavioral programs (Garner & Bemis, 1985; Hall & Crisp, 1983; Kennedy & Garfinkel, 1992); psychodynamic therapy (Bruch, 1973, 1988; Crisp, 1985; Goodsitt, 1985; Lunn, 1990; Wooley, 1991); family systems approaches (Dare, 1985; Minuchin et al., 1978; Mandanes, 1991; Marshal, Feldman, Sigal, 1989; Selvini-Palazolli, 1974, 1978; Shekter-Wolfson & Kennedy, 1991; Stierlin & Weber, 1989; Szmukler & Dare, 1992; Vandereycken et al., 1989; White, 1983); nutritive-authoritive therapies (Levenkron, 1982; Reiff & Reiff, 1992); and feminist approaches (Kearney-Cooke, 1991; Kearney-Cooke & Striegel-Moore, 1994; Orbach, 1982; 1985; Stiener-Adair, 1991; Walker, 1990; Zerbe, 1993)[11].

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[11] For more detail on current therapies the reader is directed to Emmett (1985), Johnson (1991), Ohler-Madsen (1993) and Woodside &

Recently, multidimensional approaches have been implemented, involving a treatment team of a physician, psychiatrist, psychologist, nutritionist, family therapist, dentist, the parents and the patient (Kennedy & Garfinkel, 1992; Shekter-Wolfson & Kennedy, 1991; Vandereycken et al., 1989). These multidimensional approaches, however, remain discipline specific as each therapist approaches his/her part of treatment program from their specific theoretical orientation. Although this approach to treatment claims to be multidimensional, it remains under the control of the medical professional. Intensity of the psychotherapy or family therapy is therefore monitored by the medical practitioner based on observable weight gain and changes in behaviour (Reiff & Reiff, 1992; Shekter-Wolfson & Kennedy, 1991).

Difficulties in multidimensional approaches have been noted including, maintaining consistency of goals between therapists, and maintaining agreement regarding what is best for the patient. The patient is seldom involved in this decision (Hamburg & Herzog, 1990; Herbert & Weingarten,

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Shekter-Wolfson (1991).

1991; Reiff & Reiff, 1992). In addition, developing a trusting therapeutic relationship with any one of the practitioners is difficult for a patient. With so many "doctors" who share patient information, an anorexic may withhold self-disclosure which may be crucial to therapy (Gremillion, 1992).

Empirical Evaluation of the Therapies

Although each therapist claims success from their particular approach, treatment evaluations are generally completed at one and three year intervals following therapy. As indicated by the recent outcome literature, short term follow-up assessments may not provide an accurate indication of long-term outcome and many patients may relapse (Herzog, Rathner et al., 1992; Theander, 1992).

Until recently, it was believed that family therapies provided the greatest benefit to young anorexics, while individual psychotherapies seemed to have better results with adult anorexics (Dare et al., 1990; Russell, Szmukler, Dare, & Eisler, 1987). More recent data, however, suggests that individual therapy with collateral parental therapy, in contrast to family therapy, provided the best results regardless of age of victim or duration of illness (Robin, Siegel, Koepke, Moye, & Tice, 1994). All of these studies however, require further assessments to determine long term effectiveness of the treatment program.

From the outcome data presented in Chapter I, it is evident that few therapies have long term success. It seems prognosis for anorexics is poor, regardless of treatment choice (Russell, 1992). Further, in a long-term study assessing both those who underwent therapy (medical intervention with behavioursim and some psychotherapy) and those who were diagnosed only (Engel, Meyer, Henatze, & Wittern, 1992), it seemed that there were few significant difference between the two groups. The treatment group seemed to be at a marginally higher average weight at final assessment than the non-treatment group, but fewer of the non-treatment group continued to suffer menstrual disorder. Although there is not a clear explanation for this difference, the authors of the study suggested that the return of menstruation is a functional indicator for biopsychosocial adaptation. Differences in overall functioning and general well-being, however, were insignificant. Results from an investigation of the effectiveness of various therapeutic programs, including an inpatient, outpatient and no treatment group, produced similar results (Gowers, Norton, Halek & Crisp, 1994). Thus, the question remains - does therapy really help, or does anorexia nervosa run a natural course regardless of therapeutic intervention?

Qualitative Evaluations of Treatment

Empirical evaluations of treatment seem to indicate that none of the present treatment approaches may boast a truly successful program for recovery. It is difficult, however, to understand the impact of the therapies on (partial) recovery without an understanding of the experience of the victim during treatment.

Few qualitative studies have been conducted on the experience of treatment for anorexics (James, 1990; Ohler-Madsen 1992a), however, there have been a few autobiographical accounts (Heater, 1983; MacLeod, 1981; Johnston, 1993) and case studies regarding the recovery process (Alexander, 1986; Lewis & McGuire, 1985; Katz, 1985; Marshal et al., 1989; Noordenbos, 1992; Perednia &

Vandereycken, 1989; Rorty et al., 1993). Although the focus of these studies was different, three themes seemed common to each of these accounts.

The first theme that was evident was a consistent lack of understanding of the illness for both the anorexic and her family. Although information about the characteristics of the illness were not lacking, the reasons for the behaviors and consequent effects on the family were confusing and frustrating (Heater, 1983; Johnston, 1993; Lewis & McGuire, 1985; Ohler-Madsen 1992a; Perednia & Vandereycken, 1989). Feelings of exclusion and lack of control in the therapeutic process was the second theme that seemed to be experienced by both the patient and her parents (Davis, 1991; Heater, 1983; Marshal et al., 1989; Lawrence, 1987, 1988; James, 1990; Johnston, 1993; Ohler-Madsen, 1992a). Finally, there seemed to be universal feelings of anger, blame, shame and guilt deeply ingrained in the family system throughout the therapeutic process (Alexander, 1986; Gafni, Laub & Lavie, 1990; Heater, 1983; James, 1990; Johnston, 1991; Katz, 1985; Lawrence, 1978; MacLeod, 1981; Noordenbos, 1992; Perednia & Vandereycken, 1989; Ohler-

Madsen, 1992a[12]; Lewis & McGurire, 1985). Because an exploration of these qualitative experiences has not been pursued, little is understood regarding how they may effect treatment and recovery. These attitudes and experiences, however, may be crucial considerations in treatment and outcome.

Summary

In summary, treatments to date have largely been controlled by the medical community. Because anorexics and their families usually seek help initially from a general practitioner, they are normally referred to a psychiatrist for treatment (Noordenbos, 1992). Psychiatrists generally operate from within a mainstream, medical paradigm, and therefore treatments include medical intervention, combined at times, with psychotherapy (psychoanalysis, psychodynamic, occasionally cognitive-behavioral or family therapy). Multidimensional approaches also operate from within the medical paradigm, seem to be disjointed, and have proven to be no more successful than individual programs (Gremillion, 1992).

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[12] A story-line developed from a qualitative account of the experiences of a patient with anorexia nervosa during treatment, may be found in Appendix A.

It seems from a review of the treatment literature, that greater understanding of the illness is needed for victims, their families and practitioners. Without an understanding of the disorder, it is difficult for victims and their families to chose an appropriate treatment program. In addition, anger, shame, guilt and blame seem universal in these families. If these emotions are not considered in therapy, it is possible that the therapy may actually hinder rather than help the recovery process (Perednia & Vandereycken, 1989).

CHAPTER VII: IMPLICATIONS FOR THE FUTURE AND CONCLUSION

The state of extant literature in anorexia nervosa is similar to an ancient proverb by J. Saxe. In the proverb, six blind men of Indostan go to observe an elephant in order that they might describe this animal. Each man examined the part of the elephant he was closest to and could touch, and then described the elephant. In the final passage of the poem, Saxe writes:

> *"And so these men of Indostan*
> *Disputed loud and long,*
> *Each in his own opinion*
> *Exceeding stiff and strong;*
> *Though each was partly in the right,*
> *And all were in the wrong." (Alder & Towne, 1984)*

Researchers and clinicians attempting to explain anorexia nervosa, may be likened to the men of Indostan. Each has described their observations of the illness from either a clinical or empirical perspective. Although each of these explanations is "partly in the right" it seems all may also be "in the wrong".

Implied by the poem, is the need to view the elephant as a whole. Although descriptions of each part of an elephant may be correct, the elephant as a whole is very different. Likewise, viewing anorexia nervosa in parts, may present an inaccurate picture of the illness as a whole. The goal of the present research was integrate the parts, and provide a picture of the illness from a holistic perspective.

Thus, a human ecology perspective became the framework from which a holistic model of anorexia nervosa was developed in this thesis. This perspective has allowed for the synthesis of extant theories and data along a developmental time line. As such, the changing and interactive effects of the many factors contributing to the development and perpetuation of the illness, could be outlined.

Development of a new model of anorexia nervosa has two main purposes. For research it is proposed that the model may be used as a framework to guide future investigations. In practice, the model may facilitate better understanding of the illness for anorexics, their families and practitioners. The following is a brief explanation of these future implications of the model.

Implications of the Model in Research

By synthesizing extant literature, the model has identified components of the illness that have received empirical support, integrating these along a developmental time line. The model has also identified areas that remain vague and require further research. The following is a list of possible areas for future research.

1. Intergenerational Family Influence: To what extent do intergenerational family influences effect the anorectic family system? What experiences did the parents of anorexics have as children and young adults?
2. The Parental Relationship: An assessment of the parental relationship during the early years of their marriage, the child rearing stage (prior to the onset of anorexia nervosa), the acute stage of anorexia and following "recovery" of their child, may be fruitful in gaining a better understanding of the anorectic family system.

3. Social Support: An assessment of the availability and effects of support for anorexics and their families is implied. Would increased social support help victims and their families cope with the situation?
4. Experience of Treatment: An investigation of the experiences of treatment for both anorexics and their families may provide valuable information regarding the advantages/disadvantages of various forms of treatment. This may help anorexics and their families with treatment choices, and may assist practitioners in their treatment decisions.
5. A "holistic assessment" of the experience of anorexia nervosa: It seems one of the greatest limitations of extant literature, is the lack of qualitative assessment of the illness as a whole. Although it may seem backwards to conduct a qualitative study when the topic has already received considerable empirical attention, there have been few concentrated efforts to determine what it really means to be anorexic. How do these

> individuals experience the disorder? Are the constructs identified in the various theories meaningful to the anorexic? Following from one of the basic objectives of research from a human ecology perspective, a collaborative effort between the researcher and anorexics to gain an understanding of the whole, rather than the separate parts, may prove to be fruitful. Possibly the best way to achieve a "truly holistic" perspective of the illness is to ask anorexics to tell their story.

In summary, the development of an eco-systemic model of anorexia nervosa, has identified a number of avenues that may be pursued in search of greater understanding of the complexity of the illness.

Implications of the Model in Practice

As outlined in the previous chapter, the results from outcome studies indicate that treatment approaches to date have been virtually ineffective in helping anorexics recover from the illness. From a qualitative perspective, one of the greatest difficulties faced by anorexics and their families is a lack of understanding of the disorder. Following the main objective of a human ecology perspective, it is proposed that the model may serve as a tool to facilitate greater knowledge of the illness for anorexics and their families and aid in their ability to make wise choices to improve the quality of their lives.

From the qualitative and anecdotal literature, themes common to the families of anorectics include anger, guilt, shame and blame. Each individual feels responsible for the disease and self blame is frequent (Perednia & Vandereycken, 1989; Ohler-Madsen, 1992a). The anorexic feels shamed for her behaviour and her inability to meet the standards she feels are expected of her. She feels guilty for all the pain and hardship she is causing her family (Heater, 1983; MacLeod, 1981; James, 1990; Johnston, 1993; Ohler-Madsen, 1992a; Stierlin & Weber, 1989; Scheff, 1989). An anorexic's parents often feel they are to blame for the disorder. At the same time they feel angry at their daughter for what she is doing the herself and to them, and they feel guilty for feeling angry (Heater, 1983; Johnston, 1993; Lawrence, 1987; Ohler-Madsen, 1992a; Perednia & Vandereycken, 1989). In addition, parents of anorexics report feeling shamed by the disorder - shamed that it happened in their family (Eliot, 1990; Alexander, 1986; Perednia & Vandereycken, 1989; Stierlin & Weber. 1989). With an atmosphere of shame and guilt, it is understandable that the family dynamics suffer, and that unhealthy patterns of interaction become ingrained (Fossum & Mason, 1986). The disease may then perpetuate itself in a vicious cycle of anger, shame and guilt, and thus, remain in the family system (Martin, 1991).

A precursor to healing in anorexia nervosa is understanding (Noordenbos, 1992). For the families of anorexics, a lack of understanding often leads to attempts to blame the situation on either self or another (Perednia & Vandereycken, 1989; Lawrence, 1987; Lewis & McGuire, 1985). Hurt feelings, low self worth and depression may result. Interestingly, it has been demonstrated empirically that both fathers and (particularly) mothers of anorexics tend to display significantly higher degrees of psychoneurosis, including low self worth and depression (Perednia & Vandereycken, 1989; Engel & Hohne, 1989). Empirical data also suggests depression in the parent(s) of an anorexic is only found when the anorexic is depressed (Woodside, 1993). It may be possible that the guilt, self-blame and shame may contribute to increased pathology in all family members and therefore interfere with recovery.

As mentioned previously, one of the main objectives of a human ecology perspective, is to gain knowledge that can be used to help individuals and families interact more effectively with their environment (Burr, 1992). It seems then, that promoting understanding of the myriad of factors involved in the development and perpetuation of anorexia nervosa may be beneficial. If anorexics, their families and practitioners can collaborate in gaining knowledge and understanding of the interactive effects of the many contributing factors, and an understanding that no one factor is ultimately responsible, possibly some of the guilt and self blame experienced by these families may be alleviated.

Summary

In this chapter, implications of the model of anorexia nervosa from a human ecology perspective were outlined. The model may serve two main purposes. First, it is proposed that the model may guide future research, in an attempt to provide greater understanding of aspects of the illness that remain ambiguous. Second, it is proposed that the model may be used in practice to facilitate greater understanding of the illness for anorexics, their families and practitioners. Ultimately, it is hoped that the model may encourage a paradigmatic shift: Rather than both research and treatment decisions remaining under control of the "experts", it is hoped anorexics and their families may become more informed through collaborative research, enabling them to participate in problem solving and decision making regarding their situation. It is hoped the model may help to empower anorexics and their families to develop their own effective treatment measures.

Conclusion

Anorexia nervosa is a serious illness effecting increasing numbers of young women in modern industrialized societies. It is characterized by food restriction, excessive exercise and obsessive attitudes towards body shape and achievement. Complete recovery from anorexia nervosa is uncommon, with most victims suffering from constant relapses, chronic anorexia, or the development of other psychosomatic conditions for the remainder of their lives. Approximately 15% of the anorectic population die from the illness.

In this thesis, a new approach to anorexia nervosa was proposed. Deviating from mainstream approaches to research in anorexia, the model developed in this thesis utilized a human ecology perspective. A human ecology framework, which recognizes the interactive effects of multi-level systems as they change over time, allowed for the synthesis of supported components of extant literature into a holistic model of anorexia nervosa. Thus, the model identifies aspects of the individual's biological, psychological, familial, community and societal environments which may interact over time to produce a susceptibility to the development and perpetuation of the illness.

The purpose of developing a holistic model of anorexia nervosa was two fold. First, the intent of the model for researchers, was to synthesize what is presently known about the disorder, and identify areas for future research. Second, and more importantly, the model was developed to help anorexics, their families and practitioners gain an understanding of the complexity of the illness.

A human ecology perspective as the framework for the study of anorexia nervosa represents a paradigmatic shift. Because the focus of a human ecology perspective is to view situations as a whole, rather than its component parts, and to aid individuals to participate in both research and practice concerning their situation, the control of individual's and family's lives shifts from the "experts" to themselves. Proponents of a human ecology perspective, view individuals as "experts" of their own lives. Thus, the goal of developing a model of anorexia nervosa from a human ecology perspective, was to provide a tool that may be used by victims, their families and practitioners to facilitate greater understanding of the interacting effects of themselves within their environment in producing a susceptibility to the development and maintenance of anorexia nervosa. It is hoped that through knowledge and understanding, individuals may be empowered to develop measures which will ultimately improve the quality of their lives.

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APPENDIX A: Portrait of an Anorexic

The following is a story-line developed from a qualitative study of the experience of anorexics as they struggle with the disorder. While some of the data gathered for this study involved personal contact with individuals presently suffering from the illness, a large portion of the data was compiled from autobiooographical accounts of the lived experience of the illness.

The Girl in the Glass House

This is a story about a little girl who was born into a wonderful family - a "perfect" family that was well respected in the community. From a very young age, Tina liked to play in her playhouse. This playhouse was special. It was built of **glass walls** and through these glass walls she could see everything that was happening around her. The glass walls were also very unique - they allowed Tina to be able to see into the hearts of those close to her. Through these walls she could be happy when they were happy, sad when they were sad, and hurt when they hurt. She knew she could **share their feelings**, and take some of their pain away.

The little playhouse also allowed Tina to be special. She could be unique - not a creature of "ordinariness", but someone quite unordinary. She believed that the glass walls allowed her to see **what other people wanted and expected of her** and began to live this illusion in her real life. But in order to continue to live in her glass house, she had to continue to be special, to **prove** she was **worthy** of her special place within the family. She perceived that **proof of her worthiness** was possible only through being the **"perfect child"** everyone expected her to be.

As she grew older, she began to realize that perfectionism was not possible. Try as she might to be the best little girl, the best student, the best daughter, the best everything, she felt she could never really achieve it. She began to feel like a failure. She "could never be perfect enough".

Tina felt confused and began to live in constant fear of imperfection and fear of failure. She could quit trying to be perfect and give up her special position in the glass playhouse, or she could strive harder to become the best at everything. She could not give up her special place in the family and therefore became obsessed with striving for perfectionism. All of her time and energy became focused on her pursuits for achievement. She rationalized that, by striving for excellence maybe she could hide from reality and pretend the imperfections did not exist. If she was always chasing after success, maybe no one would notice her failures - at least she would not have to admit to them. She could go on pretending she was perfect - after all, only someone who was perfect would work that hard.

Tina was desperately afraid of admitting to imperfection. She had learned at a very young age that her imperfection would hurt those close to her who were proud of "their perfect little girl". She knew what it was like to feel **guilty and shameful**, and she wanted to avoid it. In striving to be perfect however, she began to isolate herself from others and build **protective walls around her.** Although pretending to be perfect allowed her to remain in her little playhouse, the glass walls of her house gradually became covered with an opaque protective covering, and became **walls of her obsessions.** With each experience resembling failure another layer of obsession was added to the wall, until her little playhouse became **lonely** and dark inside.

The harder Tina tried to **prove her worthiness** the more likely she was to fail, and the greater she became entrenched in her "obsession" with perfectionism. She was "running so hard" away from the realities of life, that she became exhausted. Tina began to feel like she was "on a treadmill trapped inside prison walls". She felt "like a rat locked in a cage on an exercise wheel".But she was unable to find freedom and the rat race continued. Through a small uncovered spot on one of the glass walls she could see the "rest of the world rush by", but her existence was a life **trapped within her obsessions**. She felt sad, **lonely and empty**.

Tina became faced with yet another dilemma. Through her isolation and entrenchment, she knew she was again hurting those who loved her. The ones she was striving so hard to please became the very ones she was hurting through her obsessions. **Guilt, shame, and frustration** became foremost in her life. Having learned patterns of hiding, Tina responded by **denying** she was failing. Anger ensued as she began to realize that others would not continue to play her "game of everything's okay". She began to rage like an "angry gorilla", striking out at those she loved.

Within her was growing a stormy battle. Her **sense of reality**, her **cognitive self**, knew her behaviors were futile. She knew that the only way to gain "normalacy and semblance to her life" was to admit to human imperfection and break down her **walls of obsessions**. But another **"ugly self"** existed inside her that was all-powerful and all-controlling. Try as she might to regain control of herself, the "ugly self" gripped her like a "demon". **"IT"** controlled every aspect of her life and pushed her deeper and deeper into her trap.

No one really knows what happened, or how Tina was finally able to smash one of her walls, but gradually she did. Reaching a state of absolute physical exhaustion, her "ugly self" became repressed - repressed enough to allow her "cognitive, good self" an ounce of freedom to begin a new track towards living. For Tina, she continues to battle with **"IT"**, and finds that it "rears it's ugly head" often in her life, particularly during times of stress for herself or those close to her. However, she is able now to recognize "IT", and to break the **negative spiralling loop** before her **walls of obsession** again become fortified. Tina will likely always battle with "IT", but she finally has enough confidence in herself as an imperfect human being, to control "IT" and push forward with life.

APPENDIX B: "A BATTLE OF WILLS": An account of an anorexic's experience during treatment.

The following is a story-line developed from the data collected through a qualitative study conducted with an anorexic over the acute stage of her illness. The focus of the research was an assessment of her experiences with treatment. From tahe data, it seemed evident that Jill (not her real name) was in two conflicting worlds. The first world was that of treatment, an outward struggle for control. The second was the world within her, an internal struggle for control. The result of these conflicts was to want out - "I just wanted to get away from life".

The Big Game: A Battle of Wills

Jill often talked about the "game they play". In numerous readings of the data, Jill's entire experience with treatment seemed like one big game. The game was characterized by a **struggle of wills**, where she was **assigned a role** by her opponents. The name of the game was **"The battle of wills"**, and the object, from Jill's perspective, was gaining control of her life. A summary of the rules of the game follows.

The Players

Jill's opponents were the psychiatrists, medical doctors and nurses. The **struggle of wills** between "they" and "I" was obvious throughout both interviews and observations. Statements such as "they started me on", "they tried to get me to", "they force fed me","he...she...they..." identified Jill's feeling of an **external locus of control**, and may be seen throughout the data. Jill's response was a **struggle to regain an internal locus of control**, as evidenced by statements such as "I decided to stop and took myself off them", "I refused to eat and take my medications" and "I will never let anybody rule my body again, except for me". "I will", "I want", "I wouldn't" were common in the transcriptions of both the formal and informal interviews. An observation of interaction between Jill and her Doctor provided concrete evidence of the **struggle of wills**. The emphasis placed on Jill's response highlighted her perception of regained control, of winning at that stage of the game.

Jill perceived her **assigned role** in the game was that of "just another anorexic". She was "**not taken as a separate person**" but as **just a patient**. Jill's medical problems and discomforts from treatment were not treated as serious, but simply as behavioral symptoms of anorexia. They (the symptoms) were "some big story" and were just "in her mind". Jill's **concept of self** was one of "someone who is not hard to get along with...described by others as timid - not overpowering", "someone who wasn't a lying person". To be treated like "just another anorexic" was "dehumanizing" for her.

But Jill had more than one role. The **assigned role, the stereotypical anorexic**, was the role she was placed in by her opponents. Her **perceived role** seemed to contain two identities. The first was her identity as **the best little anorexic** and the second was a **realistic sense of self.** She seemed to hate being labelled an anorexic, but also hated not being labelled an anorexic. To be compared to a 66 pounder made her angry, but to think that people may not believe she was anorexic, because she didn't "look anorexic" was frightening to her. She appeared to strive to be a "good restrictor", or **the best little anorexic**. This identity seemed to be struggling with the **realistic sense of self**, a struggle of wanting, but not wanting to be anorexic. To lose the anorexia meant losing a sense of security and a sense of control. In maintaining the anorexia, she knew realistically it (the anorexia) would soon control her. She realized she needed help but had difficulty sorting out her **realistic sense of self** from her desire to be **the best little anorexic**.

The Strategies

The strategies used by Jill's opponents included "**treating the body not the mind**", keeping her on a "**trip on drugs**" and "**playing mind games**". To Jill, all of these strategies were attempts to control her.

The first strategy, "**treating the body not the mind**" was addressed by a leading Edmonton psychiatrist who deals with eating disorders. According to Dr. Kostynuk, the initial goals of treatment are to bring the anorexic's weight up. No psychiatric or psychological counselling is attempted during these initial stages, "even if it frustrated the patients" (Edmonton Journal, 1992). For Jill, this method not only frustrated her, but was confusing and caused "giant anxiety attacks". To her, the medical professionals efforts were to "get me to a magical weight where my problems would no longer exist" and "I would magically start to eat". "They think if they fix it up below I'll just go for the food". Jill believed she needed psychological counselling and needed to deal with the things inside of her - about society, her family and herself. She "couldn't see her family and herself not being involved in some form of counselling".

The second strategy Jill perceived the psychiatrists used to control and "fix" her body, was to keep her on a **"trip on drugs"**. Jill described a psychiatrist as

> "a medical doctor who deals with drugs. That's how they control your mental state, so they can gain control of your physiological state".

Jill perceived this as an unfair strategy, one which resulted in many adverse side effects, illness and a beginning dependence on drugs.

> "I was so dozed out from the Deseral. I asked a friend to look up the side effects of Deseral and I was displaying almost all of them... I know it was the Deseral because as soon as I went out of the hospital and was off of it, the headaches, aches and pains and fever went away. You'd think they'd start to worry after a week of someone having a fever of 103, but no, it's all in my mind!"
>
> "I wasn't taking the Lectopam nicely. I'd pop six of them a day. I got to the point where I was abusing drugs and I probably couldn't have made it through school...I was so whacked"

Evidence of Jill's negative experience with drugs can be found throughout each of the data sources. She became afraid of, yet dependent on the drugs - they became a major part of her life, and could have spelled her death.

> "I knew I had stored up enough pills or enough medication that I could take care of myself if I wanted to".

A series of mind games seemed to be the third perceived strategy used by the medical profession to win in the **battle of wills**. Jill felt trapped in the game - her moves to regain control were met by tactics she felt were **mind games** designed to make her mad, and control her life.

> "If this was their ploy to get me to stay in the hospital longer, to get me to stay their until Dr.P. came, it wouldn't work."

> "I thought, okay, I'll see this eating disorder specialist if maybe my psychiatrist was trying to play a withdrawal game to get me onto the eating disorder specialist."

The entire game for Jill was a no-win situation. To submit meant to give up the self-control she had worked so hard to achieve, to give up her "only control mechanism". To not **submit** however, and to regain control of her life, lead to **rejection**. Twice she was **fired** by her psychiatrists for taking herself off the drugs and removing herself from what she perceived to be a very negative environment. Twice she was told by her boyfriend that he would leave if she didn't obtain (submit to) medical treatment. In winning the game, she lost - she "felt totally rejected" (a loss of recognition and control).

> "I had been to the best and I got very, very down on things and wasn't ever, ever going to see anybody again...I had it in my mind there was no help. My anorexia got worse."

The Outcome

The outcome of the game is **ultimate control**, and leads into the third category of themes - **"I want out"**. Depression, drug abuse (available from the excess prescribed by her psychiatrist, and plans of suicide (**ultimate control**) ensued.

> "I really wanted to get out of the world I was living in... I was so far gone I couldn't get away from the pain... I just wanted to get away from life... I was planning on Thursday to (voice became very soft and she paused) commit suicide."

Fortunately, Jill did not pursue this end, but began again - a new game with a different doctor. The game continues in a negative spiral. Winning at the battle of wills in treatment, meant losing in her battle with anorexia and landed her back in the hospital. And the same game began again. The rules are the same, the players are the same and the strategies are the same. How will it ever end?!